

Supplementary Table 1		3 atm N ₂	3 atm H ₂
Generation time (min)	<i>F. prausnitzii</i>	237.0 (11.7)	240.2 (11.5)
	<i>E. rectale</i>	66.8 (5.9)***	93.9 (6.4)***
	<i>R. intestinalis</i>	72.1 (9.6)	78.8 (8.3)
Protein biomass yield (mg)	<i>F. prausnitzii</i>	0.544 (0.063)	0.538 (0.041)
	<i>E. rectale</i>	0.225 (0.016)*	0.204 (0.003)*
	<i>R. intestinalis</i>	0.247 (0.001)	0.259 (0.015)

Supplementary Table 3. Influence of H₂ on growth rate and yield of human gut butyrogens. Generation time in exponential phase and yield (quantified by total protein) of the common human gut butyrogens *F. prausnitzii*, *E. rectale*, and *R. intestinalis* grown under a headspace containing 3 atm of either N₂ or H₂. Asterisks and bold indicate a significant difference under H₂ versus N₂ (Student's t-test, p<0.05). Standard deviation is shown in parentheses. Four replicate cultures of *F. prausnitzii* and *E. rectale* were present in each condition; five replicate cultures of *R. intestinalis* were present in each condition.