Colonisation of the GI tract

REFERENCE	STUDY OBJECTIVES	STUDY DESIGN*	SUBJECTS AND (DAILY DOSE)	RESULTS
Papagaroufalis K, 2014	To assess the safety of infant formula containing *L. reuteri* DSM 17938 during the first month of life, with special reference to D-lactic acid, in comparison to infants fed a control formula. Other outcomes were GI tolerance, sleeping and crying behaviour, growth and occurrence of adverse events.	R, DB, PC 28 days Follow-up on days 112 and 168	*L. reuteri*: 36 ($1x10^8$ CFU) Control: 35 31 infants in each group took part in the follow-up on days 112 and 168	Compared to control formula: • On day 14 and at 4 months the faecal detection rate of *Bifidobacterium, Lactobacillus*, and *L. reuteri* was significantly higher in the probiotic group • There was no difference in the detection rate of *Enterobacteriaceae* or in total bacteria levels
Savino F, 2010	To study the effect of *L. reuteri* DSM 17938 on infantile colic in infants 2-16 weeks old, and investigate changes in the faecal microbiota.	R, DB, PC 21 days	*L. reuteri*: 25 ($1x10^8$ CFU) Placebo: 21	• 13 infants from each group had faecal samples analysed for *L. reuteri* DSM 17938, and on day 21 it was detected in 12 of 13 infants in the probiotic group, at a mean number of $2.8x10^4$ CFU/g. • There was no *L. reuteri* DSM 17938 detected in the faeces of the infants in the placebo group.
Abrahamsson T, 2009	Prevalence of *L. reuteri* in infant faeces after oral supplementation, and influence on the microbial ecology in infants 0-2 years old.	R, DB, PC 12 months + follow-up at 24 months.	*L. reuteri*: 95 ($1x10^8$ CFU) Placebo: 93	• *L. reuteri* was detected in the faeces of most infants after oral supplementation during the first year of life • Treatment with antibiotics did not reduce the levels of *L. reuteri*
Handschur M, 2007	To test identification methods for detection and persistence of *L. reuteri* in the faeces of 4-12 months old infants hospitalised for diarrhoea.	Open, PC 3 days	*L. reuteri* 4, whereof 2 HIV-pos. (10^{10} CFU) Placebo: 3, whereof 1 HIV-pos.	• *L. reuteri* was detected in faeces after 3 days of supplementation to infants with diarrhoea and treated with antibiotics
Karvonen A, 2001	Safety and colonisation in newborn term infants.	R, DB, PC 30 days	*L. reuteri*: 12 (10^5 CFU) *L. reuteri*: 25 (10^7 CFU) *L. reuteri*: 25 (10^9 CFU) Placebo: 28	No child had any faecal *L. reuteri* on day 0. Thereafter *L. reuteri* colonised in a dose-dependent manner.

Safety

REFERENCE	STUDY OBJECTIVES	STUDY DESIGN*	SUBJECTS AND (DAILY DOSE)	RESULTS
Gutiérrez-Castrellón P, 2014	Evaluate if daily administration of *L. reuteri* DSM 17938 reduces the frequency and duration of diarrhoea episodes and respiratory tract infections in Mexican day school children aged 6-36 months. A cost-effectiveness analysis was also made.	R, DB, PC 3 months of intervention, follow-up at 6 months	*L. reuteri*: 168 ($1x10^8$ CFU) Placebo: 168	During the study, parents/guardians reported 34 cases of exanthematous disease (18 cases of rubella and 16 cases of exanthema subitum) and 22 cases of minor trauma. None of these adverse events were deemed to be related to the study products, and no related serious adverse events were reported in any group.
Indrio F, 2014	Investigate if oral supplementation with *L. reuteri* DSM 17938 during the first 3 months of life can reduce the onset of colic, gastro-oesophageal reflux, and constipation in term newborns, and in addition reduce the socio-economic impact of these conditions	R, DB, PC 90 days Multicentre study	*L. reuteri*: 238 ($1x10^8$ CFU) Placebo: 230	Adverse events were monitored by weekly telephone calls that also monitored compliance to study products. No adverse events were reported that were related to the trial.
Garofoli S, 2014	To test if early administration of *L. reuteri* DSM 17938 to breastfed, full-term healthy infants affects functional GI symptoms, salivary sIgA concentrations at the end of a 4-week intervention period, and any differences in growth or other safety parameters	R, DB, PC 28 days	*L. reuteri*: 20 ($1x10^8$ CFU) Placebo: 20	• Three children in the placebo group needed simethicone to control GI pain, but none in the *L. reuteri* group • Growth was normal in both groups, with no differences between them • No adverse events related to *L. reuteri* were observed