Abstract Submission

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COMPARISON OF TWO PROBIOTICS IN FOLLOW-ON FORMULAE IN CHINESE INFANTS: BIFIDOBACTERIUM ANIMALIS SUBSP. LACTIS HN019 PROTECTED AGAINST RESPIRATORY TRACT INFECTIONS

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Objectives and Study: A double-blind, placebo-controlled clinical trial was conducted in urban China to investigate the health benefits of probiotic bacteria in human infants.

Methods: The study was conducted in Fuyang, Anhui Province, China, and enrolled 192 healthy infants aged 6 to 12 months. Infants received one of three premium follow-on formula daily for 12 weeks during the Chinese winter (December 2012 – March 2013). One group of infants (n=64) received a follow-on formula supplemented with 10⁶ CFU/g Bifidobacterium animalis subsp. lactis HN019, the second group (n=64) received a formulae with 10⁶ CFU/g Lactobacillus rhamnosus HN001, while the third group (n=64) received formula without added probiotics (control). The primary endpoint was physician-confirmed bacterial or viral respiratory infections during the 12 week treatment period. Secondary endpoints included antiviral or antibiotic treatments, hospitalization, stool frequency and consistency, and parentally-reported (i.e. unconfirmed) infections.

Results: According to intention-to-treat criteria, confirmed respiratory tract infections were observed in 9.4% of the control group, compared to 3.1% in the HN001 group (p = 0.28), and 0.0% in the HN019 group (p=0.03). A similar trend was observed for parentally-reported infections, with 25.0% in the placebo group, compared with 14.1% in the HN001 group (p=0.12) and 9.4% in the HN019 group (p=0.02). No infants in the HN019 group were prescribed antibiotics or antivirals, compared with 3 (4.7%) in the HN001 group and 7 (10.9%) in the control group. No cases of diarrhoea were reported in any of the infants over the 12-week study period, and no differences in stool frequency or characteristics were observed. The probiotic-containing follow-on formulae were well tolerated and no adverse events were reported. Interestingly, faecal analysis conducted at the end of the study, showed that while B. lactis was detected significantly more often in infants that received HN019, a PCR used to detect HN001 showed widespread occurrence of HN001 or HN001-like L. rhamnosus species across all three groups.

Conclusion: In conclusion, this study directly compared the benefits of two different probiotics when added to follow-on infant formula. While HN001 showed trends toward reduced infections, HN019 showed superior performance in terms of significantly reduced incidence of physician-confirmed respiratory infections, parentally-reported infections, and antibiotic/antiviral use in Chinese infants aged 6 to 15 months.

Disclosure of Interest: J. Dekker Conflict with: Study funded by Fonterra, NZ, Conflict with: Dr Dekker is an employee of Fonterra NZ, Conflict with: Fonterra NZ manufactures and markets the probiotic strains used in the study, L.-M. Xu: None Declared, H. Qian: None Declared, X.-Y. Sheng : None Declared