Moro *et al*., A mixture of prebiotic oligosaccharides reduces the incidence of atopic dermatitis during the first six months of age. Arch Dis Child 2006; 91:814–819.

Background: Oligosaccharides may alter postnatal immune development by influencing the constitution of gastrointestinal bacterial flora. Aims: To investigate the effect of a prebiotic mixture of galacto- and long chain fructo-oligosaccharides on the incidence of atopic dermatitis (AD) during the first six months of life in formula fed infants at high risk of atopy. Methods: Prospective, double-blind, randomised, placebo controlled trial; 259 infants at risk for atopy were enrolled. A total of 102 infants in the prebiotic group and 104 infants in the placebo group completed the study. If bottle feeding was started, the infant was randomly assigned to one of two hydrolysed protein formula groups (0.8 g/100 ml prebiotics or maltodextrine as placebo). All infants were examined for clinical evidence of atopic dermatitis. In a subgroup of 98 infants, faecal flora was analysed.
Results: Ten infants (9.8%; 95 CI 5.4–17.1%) in the intervention group and 24 infants (23.1%; 95 CI 16.0–32.1%) in the control group developed AD. The severity of the dermatitis was not affected by diet. Prebiotic supplements were associated with a significantly higher number of faecal bifidobacteria compared with controls but there was no significant difference in lactobacilli counts. Conclusion: Results show for the first time a beneficial effect of prebiotics on the development of atopic dermatitis in a high risk population of infants. Although the mechanism of this effect requires further investigation, it appears likely that oligosaccharides modulate postnatal immune development by altering bowel flora and have a potential role in primary allergy prevention during infancy.