

Título de la revista:
MICROORGANISMS

Título de artículo:
Changes in Gut Microbiota Correlates with Response to Treatment with Probiotics in Patients with Atopic Dermatitis. A Post Hoc Analysis of a Clinical Trial

Autor/es del artículo
Climent E, Martínez-Blanch JF, Llobregat L, Ruzafa-Costas B, Carrión-Gutiérrez MÁ, **Ramírez-Boscá A**, Prieto-Merino D, Genovés S, Codoñer FM, Ramón D, Chenoll E, Navarro-López V.

DOI (en caso de ser electrónico)
doi: 10.3390/microorganisms9040854.

Año de publicación

2021

Volumen

9

Número

4

Páginas

854

Resumen del artículo

Atopic dermatitis (AD) is a chronic recurrent inflammatory skin disease with a high impact on the comfort of those who are affected and long-term treated with corticosteroids with limited efficacy and a high prevalence of relapses. Because of the limited effectiveness of these treatments, new strategies for recovery from AD lesions are continually being explored. In this article, we describe the gut microbiome changes achieved in a recently published clinical trial with the probiotic formulation *Bifidobacterium animalis* subsp. *lactis* CECT 8145, *Bifidobacterium longum* CECT 7347, and *Lactococcus casei* CECT 9104 (formerly *Lactobacillus casei* CECT 9104), showing a significant improvement in SCORAD (scoring atopic dermatitis) index in children (4-17 years) with AD (Clinicaltrials.gov identifier: NCT02585986). The present gut microbiome post hoc study showed no significant changes in diversity (Shannon and Simpson indexes) after probiotic consumption. In the probiotic group, genera *Bacteroides*, *Ruminococcus*, and *Bifidobacterium* significantly increased their levels while *Faecalibacterium* decreased, compared to the placebo group. *Faecalibacterium* showed the highest presence and significant positive correlation with AD severity (SCORAD index), whereas *Abyssivirga*, *Bifidobacterium*, and *Lactococcus* were inversely correlated. The results suggest that the consumption of the probiotic formulation here assayed modulates the gut microbiome with significant changes in genera *Bacteroides* and *Faecalibacterium*. In turn, the improvement in SCORAD correlates with a decrease in *Faecalibacterium* and an increase in *Bifidobacterium*, among others.

Keywords: *Bifidobacterium*; *Faecalibacterium*; atopic dermatitis; gut-skin axis; microbiome; probiotics.