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Abstracts

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BACTERIAL DERIVATIVES OF *LACTOCOCCUS LACTIS* AND ECTOIN FOR ATOPIC DERMATITIS: DERMAL COMPATIBILITY AND COSMETIC ACCEPTABILITY

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Introduction: Atopic dermatitis (AD) is a chronic skin disease characterized by disturbance of the skin barrier function. Recent studies have shown that application of non-viable bacterial derivatives can strengthen the barrier function and reduce signs of inflammation.

Objectives: To assess skin compatibility and cosmetic acceptability of a new emollient for AD based on bacterial derivatives (lysate of *Lactococcus lactis*) and ectoin.

Methods: Four studies were conducted: an in vitro evaluation of irritation potential using the Hen's Egg Test on the chorioallantoic membrane (HET CAM); an allergenic potential test to confirm the absence of dermal sensitization in healthy volunteers (HRIPT); a skin compatibility study in volunteers with atopic tendency skin (Open test) and a cosmetic acceptability test in healthy pediatric volunteers. Responses in all studies were visually evaluated by a dermatologist or pediatrician, scoring potential dermatological reactions and recording any feeling of discomfort at the time of examination.

Results: The HET- CAM test showed irritation potential similar to other products in the same category. No volunteer or child participating in the studies showed any skin reactions or feelings of discomfort. HRIPT discarded allergenic potential and verified that no components induce sensitization reactions. Open test confirmed good skin compatibility in atopic skin. Finally, the test on children showed excellent tolerability, cosmetic acceptability and satisfaction among the parents.

Conclusions: Both, the in vitro and in vivo studies, confirmed the good tolerability, skin compatibility and cosmetic acceptability of this new emollient containing lysate of *Lactococcus lactis* and ectoin. The emollient represents a new approach for restitution of the cutaneous barrier in patients with AD, through the topical application of the lysate of probiotic bacteria, which acts on the epidermis thereby strengthening the skin barrier.

References: Guéniche A et al. *Bifidobacterium longum* lysate, a new ingredient for reactive skin. *Exp Dermatol*. 2010;19(8):e1-8.

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EFFICACY OF PROBIOTICS AGAINST ACUTE DIARRHOEA IN WARM AREAS

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Introduction: Acute diarrhoea is a public health problem and probiotics as adjuvant treatment have shown effectiveness in the prevention and treatment with *Lactobacillus casei* or *Sacharomyces boulardii*, since they have been shown to decrease the duration and frequency of acute diarrhoea.

Objective: To describe the effectiveness of the use of probiotics in children under 10 years of age that suffer from heat diarrhoea on the basis that their intake can modify the composition of the microbiota and act against enteric pathogens.

Methods: Randomized double blind study in a paediatric consultation in the Canary Islands with 40 children, between 5 and 10 years old, who has suffered acute diarrhoea. The experimental group was treated with *Lactobacillus* for 7 days and the control group with a placebo at the same time. Data collection period July-September 2017. Informed consent was obtained from parents or guardians.

Results: Average of age 7.35 years (n = 40). By age group, 8 years old children were the most frequently recruited age slot in the whole cohort of acute diarrhoea (37.5%). In the group that took *Lactobacillus*, a reduction in episodes of diarrhoea was found in 18% more than in the placebo group. When compared with placebo, it was shown that there was a reduction in the duration of diarrhoea by intake of probiotics 72 hours as compared to 120 hours in placebo group.

Conclusions: In the group that took *Lactobacillus*, a reduction in episodes of diarrhoea was found in 18% more than in the placebo group the intake of probiotics.

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