

PREVENTING DYSBIOSIS OF AN IMMATURE INTESTINAL MICROBIOTA WITH AN INNOVATIVE NUTRITIONAL SOLUTION

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Introduction: The postnatal period is critical to avoid permanent gut dysbiosis. It is largely dependent of the individual diet and may be improved. The present study was aimed at evaluating the synergetic effect of Ca-buryrate, Nutriose® and tannins on the prevention of gut microbiota dysbiosis.

Material & Methods: Freshly weaned piglets were used as a model of gut dysbiosis. They were distributed in 7 groups to compare the different combinations of ingredients. Weight, mortality rate and antibiotic treatment were recorded throughout the study. Fecal swabs were taken at arrival, day 14 and at the end for targeted metagenomic analysis. Intestinal tissue and content were collected to evaluate the development and maturation of the gut and the absence of inflammation.

Results: Control piglets showed the highest mortality rate (~15%). Only those that received butyrate presented no mortality. The group supplemented with the combination of the 3 were the biggest and had high mortality rate (~12%). The analysis of the microbiota composition will help to understand these results and will be correlated to the tissue analysis.

Conclusion: We hope to recommend some of the combinations tested to targeted population at risk of gut dysbiosis to promote intestinal microbiota diversification and gut health.