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## Abstracts Book



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### IN VITRO FERMENTATION OF ALOE VERA ACEMANNAN BY MIXED FECAL MICROBIOTA

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*Aloe vera* has been the object of several studies in the last two decades due to its reported health benefits. These health benefits include promotion of wound healing, antifungal activity, antidiabetic, anti-inflammatory, anticancer, immunomodulatory and gastro protective properties. However, to our knowledge, other activities such as prebiotic properties have not yet been investigated. As it is well known, the human intestinal microbiota has significant effects on host health, so that the interest in the maintenance of its balance and activity has fostered the research and industrial interest in identifying food components with prebiotic activities. Many oligosaccharides with prebiotic properties (such as fructooligosaccharides, inulin, lactulose and galactooligosaccharides) are commercially available, and many others are under study. Amongst these, acemannan, also known under the commercial name of “carrysin”, is one of them.

The goal of the present work was to assess the prebiotic potential of *Aloe vera* acemannan using fecal inocula (obtained from three healthy human donors) by *in vitro* fermentation. Changes in gut bacterial populations and their metabolic activities were monitored over 48 h by fluorescent *in situ* hybridization (FISH) and by measurement of short-chain fatty acid (SCFA) production using HPLC. The experimental results confirmed that *Aloe vera* acemannan selectively stimulated the beneficial gut microbiota, which promoted a favorable SCFA profile.

These results indicate that *Aloe vera* acemannan could be a new interesting prebiotic ingredient that, along with its other properties could open space for new applications in the food and pharmaceutical industries.

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