



HAFL Master's Thesis Abstract

Year: 2021

Student's Name: Miguel Ángel Caro Roldán

Title: ***In-vitro* evaluation of a plant-based prebiotic on the gut microbiota composition: a case report**

Summary: In this study, the in vitro effect of a pea-based galacto-oligosaccharide administered at a dosage of 0.8 g/100 mL was compared to a prebiotic derived from cow's milk. A chemostat was used to execute the fermentations. Total IgE and sIgA concentrations in the feces were quantified, and the relative count of the microbiota was determined using 16S rDNA sequencing. In general, there were no significant changes in the relative count of the gut microbiota after incubation with either of the prebiotics. According to studies, prebiotics in infant formula have a significant bifidogenic effect, altering the microbiota at a stage when immunological maturation and resistance to infections and allergies can be influenced. To determine the difference between these plant-based and lactose-based galacto-oligosaccharide, more research is needed.

Keywords: Food allergy, Galactooligosaccharide, Milk protein, Microbiota, Prebiotic.

Principal advisor: Prof. Dr. Wolfram Brück