

Poster Abstract ISAPP 2022

Summary of research studies revealing health-related effects of a specific prebiotic galactooligosaccharide mixture

Ged Baltulionis¹, Sophie Castle¹, Aleksandra Maruszak¹, Lucien Harthoorn¹

¹Clasado Biosciences, ged.baltulionis@clasado.com

Galactooligosaccharides (GOS) are a naturally occurring fermentable fibre and lactose-derived food ingredient, recognized as a prebiotic. GOS has demonstrated the ability to shift the gut microbiota balance towards a profile rich in bifidobacteria and decreased abundance of pathobionts, which is associated to multiple health benefits. The efficacy and safety of a specific prebiotic GOS, called Bimuno[®], is supported by over 100 scientific publications, including over 20 clinical trials. Multiple studies have shown that bifidobacteria are selectively grown in the large intestine and levels are increased within 7 days following administration of this GOS. A large body of scientific evidence has shown that this GOS can improve gastrointestinal health and associated quality of life, strengthen anti-pathogenic activity, improve immune function, and enhance cognitive health related to stress, mood and anxiety. More specifically, evidence has revealed an array of positive gastrointestinal-related effects such as reduction in digestive discomfort, bloating and abdominal pain, improvement of bowel habits in people with IBS or maintaining regularity in healthy populations. Studies have also shown that this specific GOS reduces the adhesion of pathogens to gut wall cells and increases the circulation of internally secreted substances that prevent invasion of pathogens or reduce incidence of travellers' diarrhoea. The positive effects by the GOS on the innate immune system is exemplified by increased levels of anti-inflammatory cytokines and decreased levels of proinflammatory cytokines. Lastly, the modulation of the gut-brain axis by this GOS has been evident from reduction of the stress hormone cortisol in healthy individuals and reduction of anxiety with better quality of life in IBS cohorts. Given GOS' useful properties as a food ingredient, including its stability and versatility, there is growing interest in including GOS as a functional ingredient. We will showcase the properties and functionalities of this specific prebiotic GOS using selected examples.