

ISAPP 2023: Discussion Group 3

Do probiotics improve health by changing the gut microbiome?

Chairs: Maria Marco and David Mills

It is frequently stated that probiotics benefit health by modulating the microbiome. But is this actually true? Human studies frequently report that probiotics have limited to no effect on the composition of the intestinal microbiota. Mechanistic research has instead shown that compounds produced by probiotics act directly on host epithelial and immune cells to result in localized and distal health-modulatory effects. In this panel, we will discuss the latest findings on the molecular mechanisms governing probiotic-mediated effects through the digestive tract. The importance of the population size and persistence of the input probiotics, their impact on the resident microbiome, and the relative contribution of direct modulation of host responses will be discussed. The goal will be to better understand the population levels and activities of ingested microorganisms that align with improved probiotic efficacy.