



Short communication

Effect of kynurenic acid on the viability of probiotics *in vitro*

Jadwiga Dolecka¹, Teresa Urbanik-Sypniewska¹,
Barbara Skrzydło-Radomańska², Jolanta Parada-Turska³

¹Department of Genetics and Microbiology, Institute of Microbiology and Biotechnology, Maria Curie-Skłodowska University, Akademicka 19, PL 20-033 Lublin, Poland

²Department of Gastroenterology, ³Department of Rheumatology and Connective Tissue Diseases, Medical University, Jaczewskiego 8, PL 20-950 Lublin, Poland

Correspondence: Jolanta Parada-Turska, e-mail: jolanta.turska@am.lublin.pl

Abstract:

Probiotics are bacteria that are commercially available as dietary supplements. One of the important properties of probiotics is their ability to survive in the intestine. Recent evidence has identified kynurenic acid (KYNA) as a bactericidal constituent of intestinal fluid. These data led us to study the influence of KYNA on the viability of selected probiotics. We found that KYNA supported the growth of bacteria in the probiotics Acidolac (*Lactobacillus acidophilus*, *Bifidobacterium*) and Lacid Forte (*Lactobacillus rhamnosus*) or retarded the growth of bacteria from the Acidolac, BioGaia (*Lactobacillus reuteri* Protectis), Dicoflor (*Lactobacillus rhamnosus* GG), Lacium (*Lactobacillus plantarum*) and Trilac (*Lactobacillus acidophilus*, *Lactobacillus delbrueckii* subsp. bulgaricus, *Bifidobacterium animalis* subsp. lactis) probiotics depending on its concentration. KYNA did not affect the viability of bacteria from the probiotic Linex (*Lactobacillus acidophilus* LA-5, *Bifidobacterium animalis* subsp. lactis BB-12). Our results suggest a potential role of KYNA in the regulation of bacterial growth in the digestive system.

Key words:

probiotics, kynurenic acid, viability, *in vitro*
