

PROBIOTIC-SUPPLEMENTED SOY BAR EFFECTS ON RESISTANCE TO INFECTION BY *LISTERIA MONOCYTOGENES*

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ABSTRACT

Probiotics are living microorganisms that help regulate the gastrointestinal tract. The aim of this project was to investigate the benefits of probiotics and their inhibitory effect on *Listeria monocytogenes* EGD. Three groups of mice were fed for two weeks with three different diets made out of soy protein bar, Control diet with no probiotic, ADH diet with *Lactobacillus acidophilus* ADH, and B6 diet with *Bifidobacterium animalis* B6. Each group was subdivided into two different groups, one of them was challenged with the pathogen and the other group was not (control group). After 14 days of feeding, the mice were challenged intragastrically with $\sim 10^8$ CFU/ml *L. monocytogenes* EGD. At day 3 post-infection, the colon and cecum were tested for probiotic concentration; the spleen and liver were tested for the presence of *L. monocytogenes*. A reduction of the pathogen was achieved for one or both treatments for all the replications. In addition, collected evidence showed that the probiotics colonized the colon and the cecum with concentrations of $\sim 10^7$ CFU. According to our results we believe that the probiotic supplemented soy protein bar holds promise to prevent listeriosis.