

ABSTRACT

Different probiotics formations have different efficacies depending upon whether they consist only one or multiple strains of probiotics. In this research, probiotics impact on immune system of female rats was examined. Strains included were *Lactobacillus plantarum* MZ707748 (Pro 1), *L. plantarum* MZ710117 (Pro 2), *Weisella confusa* MZ727611 (Pro 3), and *L. plantarum* MZ735961 (Pro 4). One strain of probiotic, *L. acidophilus*-14 (Pro 5) was purchased commercially. Different groups were designed as G1 including pro 1 and 2, G2 comprising pro 3 and 4, G3 consisting of pro 2, 3 and 5, G4 including pro 1, 2, 3, 4 and 5, G5/PC consisting only pro 5 and NC & 0 day were untreated. Complete count of blood, serum chemistry, fecal analysis and histopathological examination of thymus and liver was done. Statistical differences were seen in the parameters of complete blood count. No difference was observed in AST, ALT, bilirubin, albumin, IL-6 and IgA except TP, creatinine and globulin. Fecal strains of probiotic groups were catalase negative, antibiotic resistant, anti-pathogenic agents, and were able to survive in phenol and NaCl. Relative thymus and liver weight were also not significantly different. Histological examinations suggested no damage in the morphology of either organ. *Enterococcus lactis* OP800267, *E. sp.* OP800231, *Lactobacillus plantarum* OP800244, *E. lactis* OP800284 and *Bacillus sp.* OP800286 were isolated from G1, G2, G3, G4 and G5 respectively. It was concluded that all probiotic strains were safe to use and had beneficial effects on the hematology of female wistar rats