The Effect of Probiotic on the Histology Structure of Intestinal Layer in Balb/C Mice Model of Allergy

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by
Diding HP1,2, Endang Listyaningsih S.1,3 dan AA Subijanto1

1Sebelas Maret University School of Medicine, Solo
2Immunology Division of Biomedic Laboratory, Sebelas Maret University School of Medicine, Solo
3Department of Histology, Sebelas Maret University School of Medicine, Solo

ABSTRACT The mechanisms by which probiotic bacteria affect the immune system are unknown yet, but many of them are attributed to an increase in the innate or in the acquired immune response. The aim of this study was to examine the effect of the probiotic on the histology structure of intestinal layer in a mice model of allergy. Male Balb/C mice were sensitized and challenged intra peritoneally (i.p) with ovalbumin (OVA). Mice were immunized i.p. on days 0 and 7 with 2.5 mg of OVA adsorbed to 7.75 ml of Aluminum hydroxide gel. OVA challenges (10 mg in 10 ml of PBS) were administered orally on days 8, 9, 10, 11, 12 and 13, with mice being sacrificed on day 14. This probiotic was orally administered to Balb/C mice. Intestinal microscopic slides were prepared using parafin method and stained with hematoxylin eosin staining. The data were analyzed by Kruskal-Wallis, followed by Mann-Whitney Test. The results showed that probiotic can minimized inflammation of intestinal layer in the experimental animal, not significantly different with 3rd generation of antihistamine.