

## ABSTRACT

### THE EFFECTS OF GIVING ICE CREAM DADIH AS A PROTECTION AGAINST LYMPHOCYTE INFILTRATION AND DAMAGED MUCOSAL INTESTINAL OF MICE (*Mus musculus*) STRAIN BALB/C INFECTED WITH *Salmonella typhimurium*

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Dadih is a food containing probiotics which can prevent diarrhea. Sour taste and mushy texture of dadih is less desirable than the processed form dadih such as ice cream dadih. This study aims to prove the effect of giving ice cream dadih as protection against diarrhea which assessed from infiltration of lymphocytes and intestinal mucosal damage mice infected by *Salmonella typhimurium*.

Experimental study performed in Balb/C mice (n=25), divided into 5 groups were negative control, P1 (dadih 100%), P2 (ice cream dadih 75%), P3 (ice cream dadih 50%), P4 (ice cream dadih 25%). Observation was done on the 7th day after the administration of *Salmonella typhimurium*. Data were analyzed with *Kruskal-Wallis* followed by *Mann-Whitney* test,  $\alpha=0,05$ .

Histopathological examination showed that the most severe lymphocyte infiltration grade and mucosal damage intestinal scoring was found in negative control group, whereas the most mild was P1. Between the ice cream dadih, P2 is the most mild in grade infiltration of lymphocyte and mucosal damage. There were significant differences (p) 0,003 and (p) 0,000 ( $p<0,05$ ) between the experimental group.

There are protective effects of dadih and ice cream dadih to infiltration by lymphocytes and intestinal mucosal damage mice infected with *Salmonella typhimurium*.

**Keywords:** ice cream dadih, *Salmonella typhimurium*, infiltration of lymphocyte, mucosal damage.

## ABSTRAK

### PENGARUH PEMBERIAN ES KRIM DADIH SEBAGAI PROTEKSI TERHADAP INFILTRASI LIMFOSIT DAN KERUSAKAN MUKOSA USUS MENCIT (*Mus musculus*) STRAIN BALB/C YANG DIINFEKSI DENGAN *Salmonella typhimurium*

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Dadih merupakan makanan mengandung probiotik yang dapat mencegah diare. Rasa asam dan tekstur lembek dadih kurang diminati dibandingkan bentuk olahan seperti es krim dadih. Penelitian ini bertujuan melihat pengaruh pemberian es krim dadih sebagai proteksi terhadap diare yang dinilai dari infiltrasi limfosit dan kerusakan mukosa usus mencit yang diinfeksi *Salmonella typhimurium*.

Penelitian eksperimental dilakukan pada mencit galur Balb/C (n=25), dibagi dalam 5 kelompok perlakuan yaitu kontrol negatif, P1 (dadih 100%), P2 (es krim dadih 75%), P3 (es krim dadih 50%), P4 (es krim dadih 25%). Pengamatan dilakukan pada hari ke-7 setelah pemberian *Salmonella typhimurium*. Data dianalisis dengan uji *Kruskal-Wallis* dilanjutkan uji *Mann-Whitney* dengan  $\alpha=0,05$ .

Pemeriksaan histopatologi usus menunjukkan grade infiltrasi limfosit dan skor kerusakan mukosa usus paling berat ditemukan pada kelompok kontrol negatif, sedangkan paling ringan pada P1. Diantara es krim dadih, P2 memiliki grade infiltrasi limfosit dan skor kerusakan mukosa usus paling ringan. Hasil analisis data terdapat perbedaan signifikan (p) 0,003 dan (p) 0,000 (p < 0,05) antar kelompok perlakuan.

Penelitian ini menyimpulkan terdapat efek proteksi dadih dan es krim dadih terhadap infiltrasi limfosit dan kerusakan mukosa usus mencit yang diinfeksi *Salmonella typhimurium*.

**Kata kunci:** es krim dadih, *Salmonella typhimurium*, infiltrasi limfosit, kerusakan mukosa.