

## ABSTRACT

### THE EFFECT OF TEMPE AGAINST LIVER HISTOPATHOLOGICAL APPEARANCE OF OBESE MICE (*Mus musculus* L.)

By

Huzaimah

**Background:** Obesity still becomes health problem in the world, including Indonesia. Obesity is one of the risk factor of *Nonalcoholic Fatty Liver Disease* (NAFLD). One of the efforts to solve obesity is by giving tempe because it contains, *Polyunsaturated Fatty Acid* (PUFA) functioning as decreasing blood cholesterol.

**The objective:** Was to know the effect of tempe against liver histopathological appearance of obese mice (*Mus musculus* L.).

**Methods:** This research was carried out using laboratory experiment. There were 4 groups of treatment, they were K-, K+, P1, and P2 with the period of treatment for 28 days. Non parametric statistic with *Kruskal-Wallis test* was applied to test the effect of tempe against liver histopathological appearance of obese mice (*Mus musculus* L.) continued with *Mann-Whitney test* was applied to know the difference of liver histopathological appearance of mice (*Mus musculus* L.) on the group's treatment.

**Results:** The result of *Kruskal-Wallis test* gained  $p=0,000$  so there was no fatty liver on K- while all the mice had fatty liver on K+ ( $p=0,001$ ) and there were improvement of fatty liver degree on P1 and P2 ( $p=0,027$  and  $p=0,004$ ).

**Conclusion:** There was the effect of tempe against liver histopathological appearance of obese mice (*Mus musculus* L.).

**Keywords:** liver histopathological appearance, obesity, tempe

## ABSTRAK

### PENGARUH PEMBERIAN TEMPE TERHADAP GAMBARAN HISTOPATOLOGI HATI MENCIT (*Mus musculus L.*) OBES

Oleh

Huzaimah

**Latar belakang:** Obesitas masih menjadi masalah kesehatan di dunia, termasuk di Indonesia. Obesitas merupakan salah satu faktor risiko penyakit *Nonalcoholic Fatty Liver Disease* (NAFLD). Salah satu upaya untuk mengatasi obesitas adalah dengan pemberian tempe.

**Tujuan:** Mengetahui pengaruh pemberian tempe terhadap gambaran histopatologi hati mencit (*Mus musculus L.*) obes.

**Metode:** Penelitian ini dilakukan menggunakan eksperimental laboratorium. Terdapat 4 kelompok perlakuan, yaitu K-, K+, P1, dan P2 dengan lama percobaan selama 28 hari. Uji statistik yang digunakan adalah uji non parametrik, yaitu uji *Kruskal-Wallis* untuk menguji pengaruh pemberian tempe terhadap gambaran histopatologi hati mencit (*Mus musculus L.*) obes dilanjutkan dengan uji *Mann-Whitney* untuk mengetahui perbedaan gambaran histopatologi hati mencit (*Mus musculus L.*) antar kelompok perlakuan.

**Hasil:** Hasil dari uji *Kruskal-Wallis* didapatkan  $p=0,000$  sehingga pada K- tidak terlihat perlemakan hati, sedangkan pada K+ terlihat perlemakan hati ( $p=0,001$ ), dan pada P1 serta P2 terlihat perbaikan derajat perlemakan hati ( $p=0,027$  dan  $p=0,004$ ).

**Simpulan:** Terdapat pengaruh pemberian tempe terhadap gambaran histopatologi hati mencit (*Mus musculus L.*) obes.

**Kata kunci:** gambaran histopatologi hati, obesitas, tempe