

## **ABSTRACT**

### **THE EFFECT OF TEMPE AGAINST BLOOD LIPID FRACTION MICE OBESITY**

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Obesity is a condition where the lipid accumulation is over than the usual, which cause of genetical factor and enviroentment interaction. from the obesity patient found dislipidemia condition which is a condition where there are increase on LDL cholesterol value, total cholesterol, and Trigliserida. And also decrease on HDL cholesterol value. Dislipidemia is a risk factor for metabolic disease even cardiovascular disease to come. Tempe is a food which come from soybean fermentation with a help from *Rhizopus oligosporus*, *Rhizopus oryzae*. Inside of tempe consist of isoflavon which is an antioxidant. Fermentation process and factor II activation (6,7,4' tri hidroxil isoflavon) makes the tempe isoflavon components becomes the strongest antioxidant which can normalize the blood lipid fraction. The goal of this research is to knows the effect of tempe against blood lipid fraction mice obesity.

At this research, 20 male Mice (*mus musculus* l) DDY furrow age 6-12 weeks. The mice divided into 4 groups which consist of normal control group, obesity control group, and 2 treatment groups. Then, all of it being treated for 28 days long. The result from this research shows changes on blood lipid fraction after being given tempe. 2gr/days dose with mean value  $190,60 \pm 8,204$  mg/dl ( $p=0,000$ ) to the cholesterol total value,  $144,60 \pm 13,483$  mg/dl ( $p=0,000$ ) to the LDL cholesterol value,  $131,60 \pm 11,971$  mg/dl ( $p=0,000$ ) to trigliserol and  $72,40 \pm 10,550$  mg/dl ( $p=0,009$ ) to HDL cholestrerol value. 4gr/days dose has mean value  $184,20 \pm 12,337$  mg/dl ( $p=0,000$ ) for total cholesterol value,  $123,00 \pm 12,309$  mg/dl ( $p=0,000$ ) to LDL cholesterol value,  $112,20 \pm 13,424$  mg/dl ( $p=0,000$ ) for trigliserol and  $77,20 \pm 10,849$  mg/dl ( $p=0,009$ ) to HDL cholesterol. So, in conclusion there is effect of tempe against blood lipid fraction mice obesity.

Key Word : Obesity, Dislipidemia, Blood Lipid Fraction, Tempe, Isoflavon.