

ABSTRACT

Lestary, Dian Puji. 2011. Effect of *Lumbricus rubellus* Against Flour Enzyme Levels of transaminases (SGPT and SGOT) in *Rattus norvegicus* Infected *Salmonella typhi*. Final Task. Biology Departement Faculty of Science and Tecnology The State Islamic University Mulana Malik Ibrahim of Malang. Advisor: Dr. drh. Bayyinatul Muchtaromah, M.Si and Dr. Munirul Abidin, M.Ag

Keyword: Flour *Lumbricus rubellus*, Enzyme levels of transaminases (SGPT and SGOT) in *Rattus norvegicus*, and *Salmonella typhi*.

Based on empirical experience, earthworms can be used as medicine for many diseases in humans, one of typhus caused by the bacterium *Salmonella typhi*. This is presumably because the body of earthworms contain antimicrobial substances such as the enzyme lysozyme, agglutinin, Lytic factor, and lumbricin. Today, to facilitate the treatment of typhus, was made drug powder with the basic ingredients of earthworms. Treatment with 50°C temperature can affect the effectiveness of flour *Lumbricus rubellus* in overcoming the inhibition of *Salmonella typhi* bacteria in vivo. However kekurangan tepatan dose selection and duration of administration will affect the efficiency or flour *Lumbricus rubellus* in inhibiting the growth of *Salmonella typhi* bacteria. To that end, this study aims to determine the concentration, duration of administration, and the optimal interaction of flour *Lumbricus rubellus* are useful in the treatment of typhoid diseases.

This study is an experimental study using Completely Randomized Design (CRD) with 2 (two) factors. The first factor is the concentration of flour worm *Lumbricus rubellus* (concentration 32%, 48%, and 60%). The second factor is the duration of flour worm *Lumbricus rubellus* (7 days and 14 days). Data were analyzed by calculation of Analysis of Variance (Two Way ANOVA), if it shows a real difference then tested further by BNJ test 1%.

The results of this study indicate that administration of flour *Lumbricus rubellus* effect on decreased levels of transaminase enzymes (SGPT and SGOT) in *Rattus norvegicus* infected with *Salmonella typhi*. Average value of alanine aminotransferase levels *Rattus norvegicus* infected with *Salmonella typhi* (P1 and P2) of 111.982 U / l and 123.498 U / l, while the A1, A2, B1, B2, C1, and C2, respectively, 98.183 U / l, 90.440 U / l, 88.057 U / l, 56.091 U / l, 75.376 U / l, and 44.773 U / l. So also in AST levels decreased when compared with *Rattus norvegicus* infected with *Salmonella typhi*. In this research note that the provision of flour *Lumbricus rubellus* doses of 60% for 14 days was able to reduce levels of SGPT and SGOT *Rattus norvegicus* infected with *Salmonella typhi*.