

ABSTRACT

Mufarrichah, Lailil. 2011. **The Effect of *Lumbricus rubellus* Against Intestinal Smooth Muscle Histological and Kidney in *Rattus Norvegicus* which Infected *Salmonella typhi*.** Thesis. Department of Biology Faculty of Science and Technology State Islamic University (UIN) of Maulana Malik Ibrahim Malang. Supervisor I: Dr. drh. Bayyinatul Muchtaromah, M.Sc. Supervisor II: Dr. Munirul Abidin, M. Ag

Key words: Flour *Lumbricus rubellus*, small intestine and kidney histology *Rattus norvegicus*, *Salmonella typhi*

Based on empirical experience, earth worms can be used as medicine for many diseases in humans, one of them is 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 drug was made in the form of powder or flour with the base material and it is known that earth worms *Lumbricus rubellus* with bake in an oven morely 50° Celcius, can inhibit the growth of *Salmonella typhi* bacteria *in vitro*. However, the unexact concentration and long of duration of administration will influence the effectiveness of flour worms in treating the bacteria *Salmonella typhi in vivo*. so that, this study aims to determine the concentration and the optimal duration of administration and useful in the treatment of diseases caused by *Salmonella typhi* bacteria infection *in vivo*.

This study is an experimental study conducted in February-March 2011 held at the Laboratory of Biology Department Biosystem at State Islamic University (UIN) of Maulana Malik Ibrahim Malang. This study using Completely Randomized Design with 2 (two) factors. The first factor is the concentration of flour worms (concentration 32%, 48% and 60%). The second factor is the duration of administration (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 showed that the concentration and duration of administration flour worms affect the histological damage repair small intestine and kidney, but the interaction of concentration and duration of administration did not show any significant effect. Effective concentrations affect repairs damage the small intestine and kidney picture is the concentration of 60%, and duration of administration which effectively repairs damage affecting picture of the small intestine and kidney is the duration of 14 days.