

JOINT EVENT

31<sup>st</sup> Euro Global Summit and Expo on Vaccines & Vaccination

&amp;

4<sup>th</sup> World Congress and Exhibition on Antibiotics and Antibiotic Resistance

June 14-16, 2018 Barcelona, Spain

**Earthworm (*Lumbricus rubellus*) extract as new candidate of antimicrobial agent against *S. typhi* the cause of typhoid fever in South Kalimantan****Dian Nurmansyah**

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Typhoid fever is a foodborne disease caused by *Salmonella enterica serovar typhi* (*S. typhi*). During *S. typhi* infection the enzyme transaminase will increase due to damaged hepatocyte, and the patient will be carrier if not treated properly. Earthworms (*L. rubellus*) contains many compounds including Lumbricin I, G-90 glycoprotein, and Poliphenolic as antimicrobial, antioxidant, and hepatoprotective action in bacterial infections. This study aims to prove that the earthworms extract (*L. rubellus*) decreased the levels of aminotransaminase enzyme and the number of bacterial colonies in rat infected by *S. typhi*. This study was an experimental animal model with post-test only control group design. A total of 28 wistar rat were divided into 4 groups (2 controls and 2 treatment groups). The dose of earthworm (*L. rubellus*) extract is 100mg/kg, the concentration of bacterium *S. typhi* is  $10^5$ . Transaminase enzyme measurements performed using IFCC method, and the number of bacterial colony determined using total plate count method. The result showed that the number of bacterial colony in 2 treatment groups is lower than positive control groups. Earthworm (*L. rubellus*) extract decrease ainotransaminase enzyme levels and the number of bacterial colony on wistar rat were infected *S. typhi*

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