

## ABSTRACT

### **Giving Of Earthworms-Boiled Water (*Pheretima javanica*) To Reduce Body Temperature And The Number Of Bacteria In White Rats Post-*Salmonella typhi* Infection**

Typhoid is the top 10 diseases in Indonesia. Bangkalan District is listing as the top 10 districts for number of typhoid cases. There is a local wisdom, where the earthworm is used for handling typhoid. There are proteins, enzymes (Lumbrokinase, peroxidase, and cellulose), *Streptomyces* sp, Lumbricin I, and Lysozyme consisting in earthworms that can reduce typhoid fever and kill *Salmonella typhi* bacteria (the agent of typhoid).

Utilization of earthworms-boiled water as traditional medicine is also used by people in Bangkalan District. The use of earthworms-boiled water for handling typhoid fever has not been scientifically tested. This study aims to analyze the effect of giving earthworms-boiled water on experimental white rats post-*Salmonella typhi* infection.

This study used the laboratory experimental research design and the post-test Control Group research design. Analysts of body temperature used ANOVA and Duncan tests, while the number of bacteria used the T-test.

The result shows that there were differences in body temperature among group of experimental animals post-*Salmonella typhi* infection (sig=0.000) and there were differences the number of bacteria before dan after giving 1 ml of earthworms-boiled water (sig=0.013)..

The conclusion is that earthworms-boiled water can reduce body temperature and the number of bacteria. Earthworm-boiled water can reduce the body temperature of experimental animals even though its ability isn't as good as chloramphenicol. It is expected that the community prioritize medical treatment. The use of earthworms-boiled water might be intended only as additional therapy and it is needed further research such as toxicity tests, pharmacodynamic tests, making of standard preparations and clinical trials before it can be used by the community

Keywords: Typhoid, Earthworm, Body Temperature, Number Of Bacteria

**ABSTRAK****Pemberian Air Rebusan Cacing Tanah (*Pheretima Javanica*) Untuk Penurunan Suhu Tubuh Dan Penurunan Jumlah Bakteri Pada Tikus Putih Pasca Infeksi *Salmonella Typhi***

Typhoid termasuk 10 besar penyakit yang ada di Indonesia. Kabupaten Bangkalan merupakan 10 besar kabupaten dengan kasus typhoid tertinggi. Terdapat kearifan lokal yaitu pemanfaatan cacing tanah untuk penanganan typhoid. Terdapat kandungan protein, enzim (Lumbrokinase, peroksidase, dan selulose), *Streptomyces sp*, *Lumbricin I*, dan Lisozim pada cacing tanah yang dapat menurunkan demam typhoid dan membunuh bakteri *Salmonella typhi* (penyebab typhoid).

Pemanfaatan air rebusan cacing tanah sebagai obat tradisional juga digunakan oleh masyarakat di Kabupaten Bangkalan. Penggunaan air rebusan cacing tanah untuk penanganan demam typhoid belum teruji secara ilmiah. Tujuan penelitian ini adalah menganalisis pengaruh pemberian air rebusan cacing tanah pada hewan coba tikus putih pasca infeksi *Salmonella typhi*.

Penelitian ini menggunakan rancangan penelitian eksperimental laboratoris dengan desain penelitian *Control Group post test*. Analisis variabel suhu tubuh menggunakan uji ANOVA dan uji Duncan, sedangkan variabel jumlah bakteri menggunakan uji T.

Hasil penelitian menunjukkan ada perbedaan suhu tubuh antar kelompok hewan coba pasca infeksi *Salmonella typhi* ( $\text{sig}=0.000$ ) dan ada perbedaan jumlah bakteri antara sebelum dan sesudah pemberian air rebusan cacing tanah dosis 1 ml ( $\text{sig}=0.013$ ).

Kesimpulannya air rebusan cacing tanah mampu menurunkan suhu tubuh dan menurunkan jumlah bakteri. Air rebusan cacing tanah dapat menurunkan suhu tubuh hewan coba meskipun kemampuannya tidak sebaik kloramfenikol. Disarankan agar masyarakat lebih mengutamakan pengobatan medis. Penggunaan air rebusan cacing tanah hanya diperuntukkan sebagai terapi tambahan serta perlu penelitian lebih lanjut berupa uji toksisitas, uji farmakodinamik, pembuatan sediaan standard dan uji klinik sebelum dapat digunakan oleh masyarakat.

Kata Kunci: Typhoid, Cacing tanah, Suhu tubuh, Jumlah bakteri