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Test The Effectiveness Test Of Garlic Extract (Allium Sativum) As An Antipyretic In Fever-Induced Wistar Rats (Rattus Novergicus)

ABSTRACT

Background : Fever is a common physiological response that serves as a defense mechanism to maintain homeostasis and protect the body from pathogen exposure. It affects individuals across all age groups and can be particularly concerning in children, who are more susceptible to fever-related complications. Despite the long-standing availability of pharmacological treatments, concerns regarding adverse effects have prompted the exploration of alternative therapies derived from natural sources. Garlic (Allium sativum) has been reported to contain bioactive compounds with potential antipyretic properties, particularly allicin and flavonoids. **Objective**: This study aims to evaluate the antipyretic efficacy of garlic (Allium sativum) extract in Wistar rats (Rattus norvegicus) subjected to fever induction. **Methods**: A true experimental study was conducted using a *Pre-Test and Post-Test Control Group Design.* Fever was induced in Wistar rats using an incubator-based heating method. The ethanol extract of garlic was obtained through maceration with 96% ethanol as the solvent. The test groups received garlic extract at doses of 50 mg/kgBW and 100 mg/kgBW. Paracetamol (400 mg) was administered as the positive control, while distilled water was used as the negative control. **Results**: Fever induction using the incubator method led to a significant increase in body temperature in Wistar rats. The administration of garlic ethanol extract exhibited antipyretic effects at both tested doses. Notably, the 50 mg/kgBW dose demonstrated a more stable and effective antipyretic response compared to the 100 mg/kgBW dose. This phenomenon is likely attributed to the action of allicin, which exerts optimal antipyretic activity at lower doses, whereas higher doses may exhibit pro-inflammatory effects. **Conclusion**: The findings of this study suggest that 96% ethanol extract of garlic possesses antipyretic properties in fever-induced Wistar rats, with the 50 mg/kgBW dose demonstrating greater stability and efficacy compared to the 100 mg/kgBW dose.

Keywords: Garlic (Allium sativum), Antipyretic, Fever Induction, Wistar Rats (Rattus norvegicus), Allicin, Flavonoids.