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In vivo antimalarial assessment and toxicity evaluation of garlic (*Allium sativum*) in plasmodium berghei NK65-induced mice (Article)

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Abstract

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Garlic or *Allium sativum* is widely applied as alternative medicine and in ethnopharmacological studies. This study was done to evaluate the antimalarial properties of aqueous extract of garlic against *Plasmodium berghei* NK65. The groups of male ICR mice were intraperitoneally (i.p) infected with 0.1 mL of 1×10^7 parasitised red blood cells (RBC) before being orally given pre-and post-infection treatments with 0.2 mL of 100 mg/kg body weight (bw) of freeze-dried aqueous garlic extract. Parasitemia was microscopically examined and measured by Giemsa stained thin blood smear. There was a positive correlation ($p < 0.05$, $n = 6$) for all assessed parameters; parasitemia density (%), survival time (day) and the ability to inhibit the parasite growth (%) between pre-treated infected mice with the other groups. However, the value recorded was still lower compared to the mice treated with commercial antimalarial drug primaquine and chloroquine. However, biochemical parameters of treated animals were in the normal range indicative of no toxicity. Histological examination showed no abnormalities and injuries on the selected vital organs. This study proved garlic has potential as alternative antimalarial drug. © 2019, Malaysian Society of Applied Biology. All rights reserved.

SciVal Topic Prominence

Topic: *Trypanosoma brucei brucei* | Trypanosomiasis | Parasitemia

Prominence percentile: 60.070

Author keywords

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