

ANTI-HELMINTHIC EFFECT OF ETHANOLIC EXTRACT AND ESSENTIAL OIL OF *Rosmarinus officinalis* IN MICE INFECTED WITH *Strongyloides venezuelensis*

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Strongyloidiasis, caused by *Strongyloides stercoralis*, affects populations in developing countries, with manifestations ranging from asymptomatic to potentially fatal. Conventional treatment, primarily based on ivermectin, faces challenges such as parasitic resistance and limited accessibility. Thus, natural compounds have been explored as alternative therapeutic options. *Rosmarinus officinalis* (rosemary) has recognized pharmacological properties, but its anti-helminthic effect remains underexplored. This study evaluated the anti-helminthic activity of ethanolic extract and essential oil (qt. cineol) from *R. officinalis* in male Swiss mice aged 8 to 10 weeks, weighing approximately 20g, infected with 1,500 filariform larvae (L3) of *Strongyloides venezuelensis*. Treatment began 24 hours post-infection, and animals were divided into four groups: GI (infected and treated with water), GII (infected and treated with ivermectin – 2 mg/kg), GIII (infected and treated with ethanolic extract – 200 mg/kg), and GIV (infected and treated with essential oil – 200 mg/kg). The treatment was administered orally for six consecutive days, and on the seventh day post-treatment, animals were euthanized. Parasitic load was assessed by counting eggs in feces, the number of parthenogenetic females, and fecundity rate. A significant reduction in egg count in feces was observed in treated groups compared to the control (p=0.0284). The lowest parasite burden was found in the ivermectintreated group, which showed a significant reduction in eggs per gram of feces and intestinal females compared to other treatment groups (p=0.0154). Although the ivermectin treated group had the lowest fecundity rate, there was no statistically significant difference among treatment groups. These findings indicate that *R. officinalis* bioactive compounds reduced parasitic load and fecundity, suggesting therapeutic potential against strongyloidiasis.

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