

In-vivo* Anti-Schistosomal Effects of *Allium cepa* and *Allium sativum

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Abstract

Schistosomiasis, caused by the parasitic trematode *Schistosoma mansoni*, remains a significant public health challenge in endemic regions. Despite the widespread use of Praziquantel, limitations such as the emergence of drug resistance, reduced efficacy against juvenile worms and scarcity necessitate the exploration of alternative therapies. This study proposes to evaluate the anti-schistosomal effects of *Allium cepa* (onion) and *Allium sativum* (garlic) extracts, known for their broad-spectrum antimicrobial properties and anti-parasitic effects, in albino rats. Some of the objectives is to assess the efficacy of these plant extracts in reducing worm burden, egg count, and associated histopathological damage, in comparison to Praziquantel. The mice will be divided into seven groups, including untreated controls, single extract treatments, a Praziquantel-treated group, and combinations of the plant extracts with Praziquantel. Treatment outcomes will be evaluated through worm recovery, egg counts in hepatic and intestinal tissues, histopathological examination, and biochemical analyses. This study is expected to demonstrate the potential of *Allium cepa* and *Allium sativum* as alternative treatment for schistosomiasis, offering a natural, available and affordable treatment alternative to enhance the existing treatment regimens. The findings could pave the way for new therapeutic strategies against this pervasive parasitic disease.

Keywords: Schistosomiasis, *Schistosoma mansoni*, *Allium cepa*, *Allium sativum* and anti-schistosomiasis