Prevention of infection by schistosomes can only be guaranteed by avoiding contact with water containing infectious cercariae. However, the concept of topical agents that can reduce the likelihood of infection when contact with infectious water is unavoidable has elicited research into chemical compounds that could provide such protection. Several compounds have been shown to have anti-cercarial effects in vitro or in experimental infections, and niclosamide has been shown to have a limited prophylactic efficacy for humans.

Recently, N,N-diethyl-3-methylbenzamide (DEET, N,N-diethyl-m-toluamide), the active ingredient of most insect repellents, was demonstrated to be a potent cercaricide and an effective agent at preventing cercarial penetration into treated mouse tail skin. We evaluated 1-(3-Cyclohexen-1-yl-carbonyl)-2-methylpiperidine (AI3–37220), which has similar efficacy to DEET in insect repellent studies, for its ability to prevent Schistosoma mansoni infections in mice. Male, 6–8-week-old CBA/J mice were then exposed to 150 cercariae of a Puerto Rican strain of S. mansoni by intraperitoneal injection. In the previous study, pretreatment of mice with AI3–37220 produced similar results to DEET, although it is a different class of compound. All cercariae were found to die in the skin of animals pretreated with DEET. We did not evaluate the location of parasite attrition in this study.

Neither DEET nor AI3–37220 are likely to comprise a major arm of a control strategy for schistosomiasis. However, the results presented here, coupled with the excellent repellent activity of DEET and AI3–37220 for vectors of other parasitic diseases, warrant further investigation into the possible prophylactic activity of these compounds in given situations in tropical environments where contact with infectious water is unavoidable or there is a high risk of accidental exposure. Further investigation should include studies using other experimental host species as well as other schistosome species to verify these results.

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REFERENCES


ERRATUM

In the *Am J Trop Med Hyg* 60: 10, 14, the Mucosal Immunity Supplement to Volume 60(4), the author’s name, Marcus Göttke is misspelled in the article title and in the author’s addresses. The error was missed by both the authors and the Journal Staff. We sincerely apologize for this error.