

عنوان مقاله:

Evaluation of Ocimum bascilicum Oil and Diethyltoluamide Cream as Repellent Against Female Anopheles (Mosquitoes in Sinnar State of Sudan (۲۰۲۲

محل انتشار:

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خلاصه مقاله:

Abstract/Introduction: Female Anopheles mosquitoes are the exclusive vectors of malaria parasites in Sudan, along with several metazoan parasites such as filarial worms and viruses. The sense of smell is one of the most important senses that mosquitoes use for long-range host-seeking. Carbon dioxide from the breath of humans and animals is a strong attractant of female mosquitoes. **Methods:** This correlational study was performed in Al-Qaddal Center for Malaria Research in Sinnar State, Sudan. In this study, individual volunteers were topically applied Ocimum bascilicum oil to test its repellency activity. O. bascilicum oil was tested at four different concentrations (۳۰%, ۵۰%, ۷۰%, and ۱۰۰% v/v), respectively. **Results:** Based on the obtained results, the oil exhibited the highest repellency activity at ۱۰۰% concentration, and the average repellency rate was ۱۰۰%. However, the lowest repellency activity was at ۳۰% concentration, and the average repellency rate was ۴۵%. Diethyltoluamide ۱۳% (Soffell cream) was tested as a reference repellent cream and showed the same effect as O. bascilicum oil at ۷۰% concentration, and the average repellency rate was ۹۴%. **Conclusion:** The results demonstrated that O. bascilicum oil had high repellency activity against female Anopheles mosquitoes, and thus can be used as mosquito natural repellent.

کلمات کلیدی:

Repellent Efficacy, Ocimum bascilicum oil, DEET, Female Anopheles mosquitoes, Sinnar, Sudan

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