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Acaricidal activity of crude extract of *Annona squamosa* against *Hyalomma anatolicum* (Ixodoidea: Ixodidae)

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The acaricidal activities of crude ethanolic extract from the leaves of *Annona squamosa* (Annonaceae) was assessed against larvae and engorged female adults *Hyalomma anatolicum* using larval and adult immersion test (LIT) and (AIT), respectively. In the LIT, six concentrations of the crude extract (15, 7.5, 3.75, 1.875, 0.9375 and 0.46875%) with three replicates for each were used. The same concentrations with 6 replicates were used for AIT. The obtained results indicated that the crude ethanolic extract of *A. squamosa* at all concentrations used, is toxic to *H. anatolicum* larvae and adults. In the LIT mortality rate was observed to vary from 14.983 to 100%, 48 h after treatment. The mortality increased with increase concentration. LC50 and LC99 were 1.366 % and 10.170 %, respectively. On the other hand the effectiveness of AIT treatment against engorged females was assessed by measuring mortality, inhibition of egg production, hatchability and inhibition of reproduction (growth inhibition). AIT showed 100% mortality at the concentration of 15% , egg laying inhibition of 60.365, 62.282, 81.224, 94.117% and hatching inhibition of 28.4194, 80.69516, 88.89439 and 95.40229%, at the concentration of 0.46875, 0.9375, 1.875 and 3.75%, respectively. The results showed that crude ethanolic extract of *A. squamosa* is a promising botanical acaricide and growth inhibitor factor against *H. anatolicum*.

Biography

Elham Mohamed Osman Ahmed has completed her PhD at the age of 45 years from Sudan Academy of Sciences (SAS) Khartoum, Sudan. She is Senior Researcher in Veterinary Research Institute (VRI), Animal Resources Research Corporation (ARRC), Ministry of Livestock, Fisheries and Rangelands, Khartoum, Sudan. She has published more than 15 papers in reputed journals.

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