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Toxicological properties of *Artemisia campestris* Petroleum ether extract against Rift Valley fever vector mosquito *Culex pipiens* (L.)

Fouad Zeghib^{1,2}, Assia Zeghib^{3,4}, Soraya Hioun⁵, Fouzia Tine-Djebbar², Zahia Kabouche⁴ and Belgacem Djabri³

¹Département de Biologie, Faculté de Sciences de la Nature et de la Vie, Université Larbi Ben M'hidi-Oum El Bouaghi, Route de Constantine, Oum El Bouaghi, Algérie.

²Laboratoire Eau et Environnement (LEE), Université Larbi Tébessi-Tébessa, 12000, Tébessa, Algérie.

³Laboratoire de Molécules Bioactives et Applications (LMBAA), Département de Biologie Appliquée, Faculté des Sciences Exactes et des Sciences de la Nature et de la Vie, Université Larbi Tébessi-Tébessa, Tébessa 12000, Algérie

⁴Laboratoire d'Obtention de Substances Thérapeutiques (LOST), Département de Chimie, Université des Frères Mentouri-Constantine 1, Constantine 25000, Algérie.

⁵Département des Etres Vivants, Faculté des Sciences Exactes et des Sciences de la Nature et de la Vie, 12000, Université Larbi Tébessi-Tébessa, Tébessa, Algérie.

zeghibfouad@yahoo.fr

Abstract

The objective of the present study is to determine the larvicidal potential of *Artemisia campestris* (Asteraceae) on the fourth instar larvae of *Culex pipiens* (Linné), the most abundant species of mosquito in the area of Tébessa.

Air-dried and powdered aerial parts of *Artemisia campestris*, collected from the area of Tébessa, were extracted by percolation using organic solvents with increasing polarity to yield dry extracts. Larvicidal effect of *Artemisia campestris* Petroleum ether extract was studied in the laboratory bioassays against early 4th instar larvae of *Culex pipiens*. The activity was expressed by the mortality of the larvae treated with the tested concentration of the plant extract.

By comparison to previous results, bioassays showed high sensitivity of the *Culex pipiens* larvae to the *A. campestris* Petroleum ether extract, at applied concentrations, after 24, 48 and 72 hours of exposure to the studied oil. The larvae mortality percentage was around 100% in all exposure periods.

Before suggesting the *A. campestris* Petroleum ether extract as a new potential source of natural biocide for the control of the *Culex pipiens* (Linné) mosquito, further investigations are necessary in order to refine its larvicidal activity in terms of lethal/sub-lethal concentrations and to determine its chemical composition.

Keywords: Petroleum ether extract, *Artemisia campestris*, larvicidal activity, *Culex pipiens* (Linné), natural biocide.