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Short Communication

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Larvicidal Activity of *Cladonia substellata* Extract and Usnic Acid against *Aedes aegypti* and *Artemia salina*

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***SUMMARY*. The chloroform extract of *Cladonia substellata* Vainio was assayed against larvae of *Aedes aegypti,* the mosquito vector of Dengue fever and *Artemia salina.* The extract was tested at concentrations ranging from 1 to 15 ppm in an aqueous medium for 24 h. LC_{50} and LC_{90} were evaluated. Since the chloroform extract proved to be lethal for third to fourth instar larvae, downstream processing was undertaken to purify the active agents in the extract. The major compound in the chloroform extract was purified by crystallization followed by column chromatography to yield yellow crystals. Furthermore, usnic acid (UA) was evaluated for its larvicidal potential. The major compound in the chloroform extract, UA, exhibited LC_{50} of 6.6 ppm (6.1 to 7.0 ppm). Therefore, UA is most likely the active principle in *C. substellata.* UA showed to be toxic to *A. salina,* a reference organism in assays to evaluate the potential toxicity hazard to invertebrates in ecosystems.**

KEY WORDS: Aedes aegypti, Artemia salina, Cladonia substellata, Larvicidal activity, Usnic acid.

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