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ABSTRACT

The arboviruses transmitted by the female *Aedes aegypti* are considered a public health problem and the vector control is essential to reduce the spread of disease-causing pathogens. The main objective of this research was to investigate the chemical composition of the *Streptomyces hygroscopicus* biomass extract and its larvicidal capabilities against the *Aedes aegypti* mosquito. Regarding the result of the prospection of the chemical composition of the extract, based on the qualitative colorimetric methodology of the presence of secondary metabolites, there was a positive indication for the alkaloid test and a negative one for flavonoids. Through Gas Chromatography coupled to mass spectrometry it was possible to infer the presence of 9-12-octadecadienoic acid followed by the presence of 9-12-octadecadienoic acid and linoleic acid. The larvicidal activity against *Ae. aegypti* (LC50) of the extract diluted with 1% DMSO was 155.4 ppm, the highest mortality was with 250ppm reaching 100 porcent. Finally, it was seen that the oily extract of *S. hygroscopicus* biomass was able to act on *Ae. aegypti*, showing as a potential larvicidal for this species.

Keywords: Bioinsecticide; Gas Chromatography; Secondary Metabolites.