

**SYNTHESIS AND EVALUATION OF THE LARVICIDAL ACTIVITY OF THE  
DERIVATIVES OF THE CINNAMIC ACID IN THE COMBAT TO  
*Aedes Aegypti***

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*Aedes aegypti* is responsible for arboviruses, which cause morbidity and mortality. Due to the increase in the number of cases in Brazil in different regions, prophylactic measures are necessary that contribute to the reduction of these diseases, and one of them is the control of the mosquito through insecticides. However, in addition to being toxic, larvae have acquired resistance. In this sense, cinnamic acid and its derivatives present a broad spectrum of biological activities, including insecticides. In this study, cinnamic acid derivatives were synthesized through the reaction of Horner-Wadsworth-Emmons Olefination (HWE) between aromatic aldehydes replaced with donor groups and electron removers in the *para* position with triethyl 2-phosphonopropionate, leading to the formation of esters in moderate to good yields. The cinnamic esters were submitted to hydrolysis reaction providing the cinnamic acid and its derivatives in significant yields. Cinnamic esters and acids derived from cinnamic acid were evaluated against the fourth stage larvae (L4) of *Aedes aegypti*, and those that presented moderate to promising results in the preliminary assay were selected for the determination of CL<sub>50</sub>. Ethyl *p*-chlorocinnamate with CL<sub>50</sub> value = 8.5 µg/mL and degree of validation, similar to the positive control (temephos), was highlighted. In addition, a toxicity test was performed for those compounds with significant larvicidal activity and CL<sub>50</sub>, proving that larvicidal activity may be linked to the toxicity of some cinnamic esters.