

ANALYSIS OF THE EFFICACY OF DOUBLE BR-OVT COMBINED WITH *AEDES AEGYPTI* LARVAL EXTRACT AND BTI BIOLARVICIDE AS AN APPROACH TO ATTRACTIVE AND LETHAL TRAPS.

CAIO C. R.P. DE MELO¹⁻³; TAINÁ M.S. DA SILVA¹⁻²; GABRIEL B. FAIERSTEIN¹;
ROSÂNGELA M.R. BARBOSA¹

¹DEPARTMENT OF ENTOMOLOGY, INSTITUTO AGGEU MAGALHÃES, IAM-FIOCRUZ/PE.

²DEPARTMENT OF BIOCHEMISTRY, BIOSCIENCES CENTER, FEDERAL UNIVERSITY OF PERNAMBUCO, UFPE.

³FRASSINETTI COLLEGE OF RECIFE, FAFIRE.

Aedes aegypti and *Culex quinquefasciatus* are important representatives in the transmission of several arboviruses, such as Dengue, Zika, Chikungunya and parasites. Traps associated with oviposition baits are integrated control methods that function as stimulants. The application of attract-and-kill baits leads us to studies that explore methods such as the use of *Aedes aegypti* larval extract as a stimulant and the biolarvicide Bti for larval elimination. The experiments were initially conducted under insectarium conditions. The larvae were desiccated in an oven at 65°C for 15 hours and then aqueous extracts were produced at 0.33 larvae/mL. To evaluate the bait, paired tests were performed with different solutions: one containing 100 mL of aqueous extract (test) and another containing 100 mL of distilled water (control). Twenty pregnant females per species were introduced into separate cages and evaluated for 7 days in 12 replicates. Tests were also performed using both species together per cage. The simulated field experiment was conducted in an outdoor screened area (26 m²) where baiting potential was observed in paired Double BR-OVTs traps: Test (1 L of larval extract +2g Bti) and control (tap water only + 2g Bti). Fifty pregnant females per species were used in each of the 12 replicates over a 3-day period, with the traps collected and the eggs or rafts counted. The results of the laboratory investigation demonstrated that the preferred oviposition site was the extract for both species, with an OAI = +0.51 (p < 0.0001) for *A. aegypti*, while *C. quinquefasciatus* had an OAI of +0.67 and +0.43, respectively. Preliminary laboratory tests resulted in an OAI of +0.50 for *Aedes* and +0.93 for *Culex*. In a simulated field, the test and control traps were similar but indicated an attraction level for the test trap of OAI +0.09 for *Culex* and an OAI +0.14 for *Aedes*. Larval extracts are effective baits for stimulating mosquito oviposition.

Supported By: IAM_FIOCRUZ-PE.

Keywords: Semiochemicals, vector surveillance, vector control.