
European PhD Network "Insect Science" - XI Annual Meeting

30 November – 4 December 2020

Bioactivity of the Andean aromatic plants *Aloysia citrodora* and *Bursera graveolens* essential oils against the blowfly *Calliphora vomitoria*

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Tropical Andes is a biodiversity hot spot rich in aromatic plant species, whose potential as a source of active compounds for insect pests' control is still largely underexploited. Here, the Essential Oils (EOs) extracted from two Ecuadorian plants, the shrub *Aloysia citrodora* (Verbenaceae) and the tree *Bursera graveolens* (Burseraceae), were chemically analysed and tested for their bioactivity against the blue blowfly *Calliphora vomitoria* (Linnaeus, 1758) (Diptera: Calliphoridae). This fly is a vector of pathogenic microorganisms, dangerous in factories and stores where fresh meat is processed, stored, and sold. The main components of the *A. citrodora* EO are geraniol and limonene, while in the *B. graveolens* EO they are limonene and α -terpineol. The effects of the two EOs were evaluated against *C. vomitoria* by a behavioural assay in a two-choice olfactometer (concentrations range 0.07-2.8 $\mu\text{L L}^{-1}$ air). Besides, the insecticidal properties of the two EOs were tested by fumigation (EOs concentrations from 6.06 to 36.36 $\mu\text{L L}^{-1}$ air), by contact with topical applications using a Burkard micro dispenser (EOs dose from 0.10 to 0.60 $\mu\text{L EO/fly}$), and by ingestion of a mucilage containing EOs (from 15 to 75 $\mu\text{L EO mL}^{-1}$ mucilage), sucrose, and agarose. Furthermore, the ovicidal activity was assessed (concentrations from 0.006 to 0.075 $\mu\text{L EO cm}^{-2}$ of filter paper). The results of the behavioural assay showed a stronger repellent effect exerted by the *A. citrodora* EO, while all the toxicity tests revealed dose-dependent mortality of the blowflies and eggs.

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R Regular Presentation (20 min, discussion included) **S** Short Presentation (5 min, discussion included)