Antibacterial activity and partial characterization from native excretions/secretions of two species of *Chrysomya* (Diptera, Calliphoridae).

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This work provides insight into the nature of the antibacterial activity present in native excretions / secretions (NES) of two tropical species of Calliphoridae larvae *Chrysomya megacephala* and *Chrysomya putoria*. We evaluated the antibacterial activity present in both NES against a range of bacterial species as well its physiochemical properties. NES was collected from larvae kept in colonies fed on bovine flesh. The third-stage larvae were incubated at 37°C with 100 µL of sterile distilled water per gram of larvae. After one hour, the NES was removed, sterile filtered, frozen at -70°C and tested for antibacterial activity. The NES were tested against *Staphylococcus aureus* 9518, *Escherichia coli* K12 4401 and *Serratia marcescens* 365 grown overnight in Tryptone soy-broth at 30°C with shaking for turbidometric assay using an ELISA reader at 37°C and 550nm, adjusted to take readings for 24 hr. The results showed that the NES from two species of *Chrysomya* significantly (<0.05) inhibited *S. aureus*, *E. coli* and *S.marcescens*. The NES samples were tested through ten cycles of freezing and thawing, heating at 100°C, protease resistance and pH optimization. The antibacterial activity from NES of *C. putoria* against *E.coli* was not resistant to heat and trypsin treatment, an indicative of protein nature. On the other hand, NES of *C. megacephala* exhibited potent, thermally stable, protease resistant antibacterial activity. These results show that the nature of antibacterial factors of these two species is different. The molecular fractionation of these secretions are being performed for isolation of the active factors involved.

**Word Keys:** Antibacterial activity, Calliphoridae larvae 
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