

Identification of attractant-derived bioactive compounds in the haemolymph of pest male carambola fruit fly, *Bactrocera carambolae* and melon fly, *B. cucurbitae*

*Alvin Kah-Wei Hee

Department of Biology, Faculty of Science, Universiti Putra Malaysia, 43400 UPM Serdang, Selangor

**Corresponding author. email address: alvinhee@upm.edu.my*

Carambola fruit fly (CFF), *Bactrocera carambolae* and melon fly, *B. cucurbitae* are important fruit pests of economic importance. These flies are known to be strongly attracted to two different groups of male attractants- CFF to methyl eugenol (ME), and melon fly to raspberry ketone (RK) that have been successfully used in male annihilation and quarantine detection. Pharmacophagy of those attractants resulted in the biotransformation of ME to (*E*)-coniferyl alcohol (CF) that is a booster component of male sex pheromone in CFF whilst RK was sequestered unchanged as one of the male sex pheromone components in the melon fly. The presence of either CF or RK that sequestered in the rectal gland prior to emission during courtship period at dusk was investigated in the male circulatory system. These results and their implications in relation to that known about the oriental fruit fly, *B. dorsalis* will be discussed.

Keywords: Methyl eugenol, raspberry ketone, (*E*)-coniferyl alcohol, carambola fruit fly, melon fly, haemolymph