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**Behavioural responses of gravid *Aedes aegypti* (Diptera: Culicidae) to
synthetic oviposition attractants identified from grass infusions volatiles.**

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Grass infusions have been used as oviposition attractants and/or stimulants for enhancing ovitrap efficacy. However, the infusion procedures are very time-consuming and extremely labour-intensive. Thus, the volatiles released from grass infusions that attract gravid mosquitoes *Aedes aegypti* to ovitrap were identified by coupled gas chromatography-electroantennogram detection (GC-EAD), coupled gas chromatography-masspectometry (GC-MS), electroantennography (EAG) and field trapping. Six candidate compounds were identified and evaluated in the field and in laboratory. Electrophysiological studies showed that antennas of gravid mosquitoes are sensitive to all synthetic compounds but only few individual compounds elicited behavioral responses within a dual port olfactometer. Laboratory and field studies showed that the lures and dispensers are still attractive after 30 days old in the environment. Video recording analysis of the behavior response of gravid *A. aegypti* to adult mosquito trap (MosquiTRAP[®]) baited with the oviposition lure (AtrAedes[®]) showed that chemical and physical structures of odor plumes have great influence on the trap catch performance. At the moment, the MosquiTRAP[®] and the AtrAedes[®] are being evaluated for *A. aegypti* national monitoring program in Brazil.

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