



Universidad Veracruzana

Facultad de Bioanálisis / Veracruz

BRIEF REPORT ECOCO

Abstract.

Mosquitoes are attracted to compounds emitted by humans in their sweat, such as lactic acid. Repellents contain molecules that affect the olfactory and gustatory systems of mosquitoes. This is the case with citronellol, a compound found in citronella, which blocks the olfactory receptors of mosquitoes. This creates a “scent curtain” that covers people and prevents mosquitoes from detecting them; in high concentrations, it can even repel them; according to Debboun in 2025. A 2018 by Zhu study indicates that there are fatty acids in coconut oil that are more effective than a potent synthetic repellent called DEET (N,N-Diethyl-meta-toluamide), which has negative health effects.

In a preliminary study on a culture of human peripheral blood lymphocytes, we exposure to ECOCO smoke for 3, 6, and 12 hours was tested. Cytotoxicity was evaluated, and compared to non-exposed lymphocytes, there was no significant difference in cell viability. We continue conducting entomological and human health studies to compare effectiveness against environmental friendliness and health safety.

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