

# A natural, alternative insect repellent to DEET

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Isolongifolenone, a natural compound found in the Tauroniro tree (*Humiria balsamifera*) of South America, has been found to effectively deter biting of mosquitoes and to repel ticks, both of which are known spreaders of diseases such as malaria, West Nile virus, and Lyme disease.

Derivatives of isolongifolenone have been widely and safely used as fragrances in cosmetics, perfumes, deodorants, and paper products, and new processing methods may make it as cheap to produce as DEET. The results of this research are presented in the latest issue of *Journal of Medical Entomology* in an article by Aijun Zhang et. al titled "Isolongifolenone: A Novel Sesquiterpene Repellent of Ticks and Mosquitoes."

The authors found that isolongifolenone deters the biting of the mosquitoes *Aedes aegypti* (L.) and *Anopheles stephensi* Liston more effectively than the widely used synthetic chemical repellent N,N-diethyl-3-methyl benzamide (DEET) in laboratory bioassays. Furthermore, it repelled blacklegged ticks and lone star ticks as effectively as DEET.

Since "isolongifolenone is easily synthesized from inexpensive turpentine oil feedstock," the authors write, "we are therefore confident that the compound has significant potential as an inexpensive and safe repellent for protection of large human populations against blood-feeding arthropods."

In addition, a new, patented method developed by the authors to efficiently produce isolongifolenone would make it even more cost effective.

Source: Entomological Society of America

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