

NO BUG: Biobased mosquitoes repellent personal protective equipment (PPE)

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Abstract

In tropical regions (South America, Asia and Africa) diseases like malaria and dengue cause many deaths. These diseases are transmitted through mosquitoes bites (*Anopheles sp.* and *Aedes aegypti* respectively). The current practice to protect against transmission of these diseases is by use of mosquito repellents. Common mosquito repellents used today are synthetic in nature and are suspected or have been proved to be harmful to the user and environment (e.g. DEET, DDT, dimethylphylphthalate, parathion etc).

This research work is part of the FP7 No-Bug project (Novel release system and bio-based utilities for insect repellent textiles). The main interest of the project is personal protective textiles against insects (mosquitoes) for application not only in tropical areas where vector borne diseases are a major threat to the public health but also in European countries where the presence of mosquitoes can be nuisance.

To solve the problems associated with the synthetic repellents, novel bio-repellents will be identified and an innovative slow release system established. Our aim is to develop a novel insect repellent personal protective equipment to be used by professional travelers (education, business, research, volunteers, missionary and peace corps) when they travel for duty in mosquito prone areas. The target mosquitoes are *Anopheles stephensi* which cause malaria and *Aedes aegypti* that transmit dengue.

Keywords: Personal protective equipment (PPE), Bio-repellents, professional travelers, malaria, dengue, mosquito.