

Efficient natural spatial insect repellents

Opportunity on offer:

- Licensing

Patent status

US provisional application: March 14, 2013
Owner: University of Neuchâtel

Description of the Invention

□ Background

DEET and Icaridine are the most commonly used mosquito repellents despite their adverse side effects, such as skin and eye irritations and allergic reactions. Besides this, DEET is also a possible neurotoxin and carcinogen in mammals. Hence, a safe mosquito repellent exhibiting efficacies similar to DEET and Icaridine but without their undesirable properties would be highly attractive for human and animal healthcare.

□ Technology

We offer a highly effective composition of natural products which interfere with the chemosensory signalling pathways of mosquitoes, thus affecting the insect's behavioural activity and eliciting an avoidance response. Repellent activities are superior or comparable to DEET when tested in the laboratory and in the field.

□ Development status

- Laboratory: The compounds were identified and their potency verified with the use of OBPs (odorant-binding proteins) binding competition and repellency Assays.
- Field Trials: Mosquito repellency (against *Anopheles gambiae s.l.* and *Culex sp.*) was tested in field trials using experimental huts with volunteers to mimic actual living conditions.

□ Main advantages

- environmentally safe
- highly effective mosquito repellent (effects comparable or superior to DEET)
- effective also against other biting insects
- non-toxic compounds
- repellent contains readily available compounds

□ Target markets

- Consumer healthcare, Animal healthcare

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