Plant extracts to prevent malaria in Eastern Africa

Preamble

Malaria is among the severe infectious disease worldwide, and a critical public health issue in tropical countries. 90% of the population affected by malaria globally is in Sub-Saharan Africa. The population groups that stand a higher risk of contracting malaria are infants, children under five years and pregnant women. Antimalarial drug resistance is a recurring problem for the medical industry and as such requires innovative preventive measures to minimize infections.

The use of some plant extracts as repellents has been proven as an effective way to prevent mosquito bites. Repulsion is a strategy to reduce human-vector contact and is an important method for combating vector-borne diseases such as malaria. The African biological diversity comprises plant species that can be effective insect repellents. Catnip is one of the numerous plant species containing mosquito repellent characteristics and it is a natural and safer alternative to the synthetically derived chemicals and insecticides that cause irreversible damage to the ecosystem. Plant-based malaria-preventive products are natural and safer than the synthetically derived repellent products that may cause irreversible damage to the ecosystem.

Technology

The project will develop and test minimum viable products using essential oils extracted from catnip and other plant-based species to come up with mosquito repellents in the form of soaps, sprays and lotions. The validated repellents will undergo certification by the relevant authorities before distribution to the market using sustainable business models. Catnip plants will be locally grown by smallholder farmers who will be part of the value chain as raw material suppliers.

Project leader

Tatien Masharabu - University of Burundi, Burundi

Local and Regional benefits

This project will harness locally available resources to produce value-added malaria repellent products that are environmentally friendly thereby contributing to malaria prevention in the eastern Africa region. In so doing, various opportunities to build a locally based value chain will be created.

Project Partners

- University of Burundi, Burundi
- Karire Products, Burundi
- Gudie Leisure Farm, Uganda
- Jicho Communicative Ltd, Tanzania

For more information about this project, please contact:

BioInnovate Africa
International Centre of Insect Physiology and Ecology (*icipe*)
Duduville Campus, Kasarani P.O. Box 30772-00100
Nairobi, Kenya.
Tel: +254-20-8632433
Email: bioinnovate@icipe.org