Malaria: Kaduna Varsity Prof, Others Develop Mosquito-repellent Fabric

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A Professor in the Department of Pure and Applied Chemistry, Kaduna State University (KASU), Zakari Ladan, and other co-researchers, have developed a mosquito repellent fabric.

The Public Relations Officer of the Institution, Adamu Bargo in a statement on Sunday said this was part of efforts aimed at ending the malaria scourge in the Country and beyond.

According to him, the product was the outcome of a more than N27 million Research Grant, under the 2020 National Research Fund (NRF), of the Tertiary Education Trust Fund (TETFund).

“This is the first NRF/TETFund grant won by KASU as the host Institution, in collaboration with Bingham University and Vaal University of Technology, South Africa,” he said.

He identified the research topic as “Development of an Eco-friendly Mosquito Repellent Fabric, Embedded with Nanoparticles Encapsulated with Vitex Negundo Bioactive Compounds”.

He said that Ladan, the principal researcher, with a specialty in organic and synthetic chemistry, conducted the research alongside three others.

The spokesman said the other researchers were; Dr. Bamidele Okoli, an organic chemist from Bingham University, Dr. Uju Ejike, a biochemist from Bingham University, and Dr. Mthunzi Fanyana, an expert in nanotechnology from Vaal University of Technology, South Africa.

He added that nightgowns were produced from the fabric, rather than the continuous use of chemical insecticides or mosquito-treated nets with synthetic chemicals.

Bargo explained that the fabric was embedded with nanoparticles encapsulated with Vitex Negundo bioactive compounds for the control of mosquitoes.

“The research is focused on producing a mosquito-repellent fabric, embedded with nanoparticles encapsulated with the active constituents of Vitex Negundo bioactive compounds.

“The type of mosquito-repellent fabrics developed from this research is in the form of sleeping nightgowns with other bio-products.

“They include bio-insecticide sprays and repellent creams, formulated with the plant’s bioactive constituent for the control of mosquito bites,” he said.

According to Bargo, the grant under the supervision of Prof. Ben Chindo, Director of Research and Development, KASU, has fulfilled TETFund’s requirements, having achieved the project’s objectives.

He said that the project had achieved its objectives based on the expected outcomes, including the production of the nightgowns from the mosquito-repellent fabric.

Other outcomes, he said, included two international conferences, the publishing of seven articles in high-impact factor journals, and two conference proceedings.

“The researchers also patented a novel essential oil pilot plant that can isolate aromatic bioactive constituents from plants, useful in the cosmetic, pharmaceutical, and flavour industries.”

Bargo added that an NRF/ TETFund Workshop was also organised at Bingham University, Karu, on the topic: “Malaria Prevention and Control Measures, using Some Plant Bioactive Constituents Found in North Central Geo-political Zone of Nigeria.“

“Five different products were formulated, using isolated bioactive constituents of Vitex Negundo plant, namely; mosquito repellent cream and pure eucalyptus oil,” he said.

Bargo listed others to include; aerosol sprays, mosquito repellent spray fitted with fan and gloss, and water-based mosquito repellent paint.

Read the original article on The Sun Nigeria.