

## EDITORIAL

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# Medically Important Vector Borne Disease Control-Botanical Plant Extract Trials

**Rakhshan***Department of Biotechnology, Tej Narayan Banaili College, T. M. Bhagalpur University, Bhagalpur-812 007, Bihar, INDIA*

Mosquitoes are vectors of many pathogens which causes serious human diseases like Malaria, Filariasis, Japanese encephalitis, Dengue fever, Chikungunya, Yellow fever and Zika virus which constitute a major public health problem globally [1, 2]. Mosquito borne diseases cause high level of economic impact all over the world and result in millions of death every year. They infect around 700,000,000 people annually worldwide and 40,000,000 only in India [3].

The continuous use of synthetic pesticides to control vector mosquitoes has caused physiological resistance, toxic effect on human health, environmental pollution and addition to these, its adverse effects can be observed on non-target organisms. Synthetic chemical pesticides have been proved to be effective, but overall in last 5 decades indiscriminate use of synthetic pesticides against vector borne disease control have originated several ecological issues due to their residual accumulation and development of resistance in target vectors and their chronic effects [4].

A lot of plants products have been tested as insecticides against mosquitoes as they are non-toxic to human beings [5, 6]. Botanical insecticides are believed to be better alternative option to replace synthetic pesticides. Plants families viz., *Asteraceae*, *Cladophoraceae*, *Lamiaceae*, *Miliaceae*, *Oocystaceae*, *Rutaceae* and *Solanaceae* have various types of larvicidal, adulticidal or repellent activities against various mosquito species [7]. Thus, in this situation the best choice we have is natural botanical pesticides, which is an eco-friendly alternative safe way to control mosquitoes. The search for natural and benign environmental mosquitocides is ongoing worldwide [6, 7]. Increasing literature source is available on natural products of plant derived mosquitocidal agents. Therefore, researchers necessitate the search for botanical products to control the mosquito vectors for the management of Public Health Programmes.

This is where the “Botanical plant extract trials” can help us to reduce insect resistance problem and their adverse effects on environment. This would be helpful for the suitable management of vector mosquitoes and to take precautionary measures against mosquito borne diseases. Its continuous usage will minimize the risk against human health.

As summary, identification and recognition of biological properties of natural products became one of the rapid growing

scientific fields and the use of botanical plant extracts will provide much needed confidence to environmental health.

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\*Correspondence to:

**Dr. Rakhshan, PhD**

Department of Biotechnology, Tej Narayan Banaili College, T. M. Bhagalpur University, Bhagalpur-812 007, India  
e-mail- [rakhshankalim@gmail.com](mailto:rakhshankalim@gmail.com)

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