

## **MINOR RESEARCH PROJECT**

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**Title : “SCREENING INDIGENOUS PLANTS FOR ANTILARVAL  
ACTIVITY AGAINST AEDES MOSQUITOES CAUSING CHIKUNGUNYA”**

### **Summary of the Project**

**Human welfare has suffered a lot through the centuries because of parasites and vectors. The rise in infection is not merely due to the increase in population many areas which were once free of mosquito borne disease now report cases. The world is now recognizing and welcoming the importance of herbal products for vector control. Kerala is rich with its herbal flora. Some of the plants freely available here are supposed to have antilarval activities in conventional practice.**

**Biocontrol of mosquitoes with plant metabolites envisage the use of plant metabolites for control of the larva of the vector. Among the Wide spectrum of chemicals used most of them are non-selective and biologically non-degradable and they will enter in to the human body through food chain as a result of biological magnification. So the use of natural materials with antilarval property has prime importance. Many plants has been tested as potential source of insect repellents. The proposed investigation is an effort to fill up the gaps in this area using natural products.**

The project evaluated the screening of locally available plants for the identification of larvicidal properties, antilarval testing against *Aedes* mosquitoes and identified the effective larvicidal plants. Preliminary screening on 118 locally available plants, 47 were found to be active against *Aedes aegypti* larvae. The other plant species are considered ineffective as they showed no activity. A study on the phytochemical analysis of the extracts of the different parts of the plants which showed promising larvicidal activity viz., *Pimenta dioica*, *Piper nigrum*, *Plectranthus amboinicus* and *Lantana camara* were studied in detail. The extracts of the various parts of these plants with different solvents like methanol, petroleum ether and acetone proved to be remarkable larvicides against *Aedes aegypti* larvae. The use of these plant materials with selective activity which are biodegradable inexpensive, ecofriendly and readily available in endemic areas, an awareness should be created among the public about their larvicidal properties, thus one can replace the synthetic materials. The results of the experiment indicate that these plants could be studied further in detail and its beneficial effect to the control of vectorborne diseases could be utilized for healthy environments.