

The Utilization of Banana Leaves as a Substitute for Synthetic Mosquito Repellent

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Abstract : Introduction: Mosquitoes are known to transmit various diseases such as malaria, dengue fever, and Zika virus. Mosquito repellents are commonly used to prevent mosquito bites. However, some of these repellents contain chemicals that can be harmful to human health and the environment. Therefore, there is a need to find alternative mosquito repellents that are safe and effective. Objective: The objective of this research is to investigate the effectiveness of banana leaves as an alternative mosquito repellent on Plasmodium falciparum and Plasmodium vivax. Methodology: The research will be conducted in two phases. In the first phase, the repellent properties of banana leaves will be tested in a laboratory setting. The leaves will be crushed and mixed with water to extract the active ingredients. The extract will be tested against mosquitoes in a controlled environment. The number of mosquitoes that are repelled by the extract will be recorded. In the second phase, the effectiveness of the banana leaf extract will be tested in the field. The extract will be applied to the skin of human volunteers, and the number of mosquito bites will be recorded. The results will be compared to a commercially available mosquito repellent. Expected Outcomes: The expected outcome of this research is to determine whether banana leaves can be used as an effective mosquito repellent. If the results are positive, banana leaves could be used as an alternative to chemical-based mosquito repellents. Conclusion: Banana leaves have been used for various purposes in traditional medicine. This research aims to investigate the potential of banana leaves as an alternative mosquito repellent. The results of this research could have significant implications for public health and the environment

Keywords : banana leaf extract, mosquito repellent, plasmodium falciparum, public health

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