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Molecular Identification of Mosquito Vectors and Their Management

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Editor

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Chemical Methods for Control of Mosquito Vector

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Sabita Shroff, Showkat Mir, Binata Naik, Iswar Baitharu, and
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Abstract

Vector-borne diseases take a big toll of life each year in most of the tropical and subtropical countries including India. Among the number of insect species that act as a vector, mosquitoes play a critical role in the transmission of numerous deadly diseases. Some of the major mosquito-borne diseases that incur a great economic loss to the public include malaria, yellow fever, dengue fever, chikungunya, filariasis, and encephalitis. Malaria alone affects some 3.2 billion people living in 117 endemic countries and has been reported to cause over 1 million deaths annually. As per the Indian Council of Medical Research report, ~1000 people lose their lives each year due to malaria infection out of 2 million confirmed cases. However, WHO reports estimate much higher annual death in India of about 15 million confirmed cases and 20,000 deaths. As per WHO reports, India is the major hub of malaria infection contributing 77% of total malaria in Southeast Asia. Worldwide death toll because of these vector-borne diseases especially that transmitted by a mosquito is very high in low-income countries despite the availability of effective curative measures. Controlling and managing the mosquito population below the economic injury level is the most preferred preventive strategies in vector-borne disease control. Initially, environmental management was the major tool in eradicating mosquito populations in a locality which though was sustainable barely effective in controlling the mosquito population in various set up resulting in epidemics. The necessity to have an

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