



National Conference on Sustainable Developments in Engineering,
Science, Humanities and Management (NCSDESHM – 2025)
28th December, 2025, Raipur, Chhattisgarh, India.

CERTIFICATE NO: NCSDESHM /2025/ C1225968

An Overview of Dengue Virus and Vector

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ABSTRACT

Dengue is a rapidly emerging mosquito-borne viral disease caused by the Dengue virus (DENV), a single-stranded RNA virus belonging to the genus *Flavivirus* in the family *Flaviviridae*. There are four antigenically distinct serotypes (DENV-1, DENV-2, DENV-3, and DENV-4), each capable of causing a spectrum of illness ranging from asymptomatic infection and classical dengue fever to severe dengue, including dengue hemorrhagic fever and dengue shock syndrome. The global incidence of dengue has increased dramatically over recent decades, particularly in tropical and subtropical regions, posing a major public health challenge. The principal vectors responsible for transmission are *Aedes* mosquitoes, primarily *Aedes aegypti* and *Aedes albopictus*. These vectors are highly adapted to urban environments, breed in artificial water containers, and exhibit daytime biting behavior, which enhances human–vector contact. Climatic factors, rapid urbanization, population growth, and inadequate vector control measures significantly contribute to the expansion of dengue transmission. In this article, an overview of dengue virus and vector has been discussed.

Keywords: *Dengue, Virus, Vector.*