

QUANTIFICATION OF WEST NILE VIRUS IN VECTOR MOSQUITO SALIVA

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ABSTRACT. Saliva was collected from 4 species of mosquitoes intrathoracically inoculated with West Nile virus (WNV). The amount of infectious virus in the saliva was quantified by plaque assay and the number of WNV genomic equivalents (GE) was measured by reverse transcriptase–polymerase chain reaction. *Ochlerotatus triseriatus* had the greatest mean amount of infectious virus per saliva collection, followed by *Aedes albopictus*, *Culex pipiens*, and *Cx. quinquefasciatus*. The mean GE/saliva collection was also greatest in *Oc. triseriatus*, followed by *Cx. quinquefasciatus*, *Cx. pipiens*, and *Ae. albopictus*. The variance of log GE/saliva collection for *Ae. albopictus* was significantly lower than the variance for the other 3 species. This study provides a basis for comparing this component of vector competence and for determining the amounts of virus inoculated into vertebrates in experimental host competence studies.

KEY WORDS West Nile virus, vector competence, saliva, *Culex*, *Aedes albopictus*, *Ochlerotatus triseriatus*