PEPTIDE INHIBITORS OF DENGUE AND WEST NILE VIRUS INFECTIVITY

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Three peptides, about 30 amino acids long, that mimic the sequence of the viral envelope structural protein inhibit viral infectivity. The peptides are thought to interact with the virus, of which two of these peptides, are able to bind to the ectodomain of the E protein as determined by surface biolayer interferometry. Cryo electron microscopy has shown that the virions incubated with these peptides are disrupted in various ways depending on the peptide. For instance, a peptide that mimics the stem region of the E protein is found to cause the virus to lose its RNA genome and to attain a structure reminiscent of a pre-fusion intermediate. More details will be presented.