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Letter to the Editor

NMR assignment of the Dengue 4 virus envelope protein domain III

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Several flaviviruses are significant human pathogens, including four dengue viruses (DEN 1–4), yellow fever, Japanese encephalitis, West Nile and tick-borne encephalitis. The E-protein plays a central role in virus:host-cell receptor binding and membrane fusion (Heinz and Allison, 2003). The N-terminal 400 E-protein amino acids contain three distinct domains (ED1, ED2 and ED3). The highly immunogenic ED3 is the putative receptor-binding domain. To determine structural differences between DEN4 ED3 and other flavivirus ED3 domains, we initiated a study of the DEN4 ED3 (E residues M288–K400). We have determined 77% of the backbone and 80% of the side chain ^{1}H, ^{13}C and ^{15}N resonance assignments. Missing assignments are mostly located on the unstructured N-terminus (residues 1–10), C-terminus (residues 106–112) and exposed loops. The chemical shifts have been deposited in the BioMagResBank database (accession number 7087).

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References: Heinz F.X. and Allison, S. (2003) Adv. Virus Res., **59**, 63–97.

David E. Volk[a], Yi-Chien Lee[a], Xin Li[a], Alan D. T. Barrett[b] & David G. Gorenstein[a,*]
[a]*The Department of Biochemistry and Molecular Biology, The University of Texas Medical Branch, Galveston, TX 77555-1157, USA;* [b]*Department of Pathology, The University of Texas Medical Branch, Galveston, TX 77555-1157, USA*

*To whom correspondence should be addressed. E-mail: dggorens@utmb.edu