Poster 1

Three-dimensinal Structure of PreS1(21-47) of Hepatitis B Virus in TFE and SDS micelle studied by NMR Spectroscopy

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The surface antigen of hepatitis B virus (HBsAg) exposes three protein domains: preS1, preS2 and S. In previous studies, it was shown that preS sequences expressed in transfected yeast cells bind specifically to plasma membranes of human liver. Also subviral HBsAg filaments which are rich in preS1 bind well too, while HBsAg 20nm particles which contain small amuont of preS1 bind to much lesser degree. The binding can be inhibited by a monoclonal antibodies which can recognize a sequence epitope between amino acids 21 and 47 of the preS1 domain. In this study, tertiary structure of the preS1(21-47) peptide was studied by CD and NMR spectroscopy. The tertiary structure of preS1(21-47) peptide in 50% TFE for random and SDS micelle contains α-helix in the middle of the peptide.