Immunogenicity of Novel Vaccines for Hepatitis C Virus

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Hepatitis C virus (HCV) is one of the most prevalent and deadly blood-borne pathogens. No vaccines are currently available to prevent or treat HCV infection. Using recombinant DNA techniques, we developed several novel vaccines for HCV using a modified herpes simplex virus backbone. Mice were immunized with vaccine DNA alone or vaccine DNA packaged in herpesvirus particles. Antibody responses were measured by ELISA following vaccination. Most vaccine groups developed greater than 10 ug/ml of HCV-specific antibody, demonstrating that all of the vaccines were immunogenic and stimulated high levels of serum immunoglobulin G (IgG). We are currently measuring T cell responses in the various vaccine groups. These results demonstrate the immunogenicity of novel HCV vaccines in a mouse model. These vaccines may someday be used to prevent HCV infection in man.