

Virulence of a vaccinia virus mutant (VV-RG8) lacking interferon-gamma receptor homolog in mice. Athymic nude mice (n=10 per group) were challenged with viruses VV-RG (parental strain) and VV-RG8 mutant at a dose of 3×10^8 PFU/mouse and observed for 60 days. A: Survival. Those suffering a severe infection, defined as having lost 25% of their original body weight, were euthanized. Three mice in the VV-RG group either died or were sacrificed between days 34-45 post-infection, while all VV-RG8-inoculated mice survived the experiment. B: Weight gain progression. Statistically significant differences between groups in weight changes were observed during the 2nd – 6th weeks post-infection. C: Time-course of pock-lesion appearance on mice. D: Demonstration of pock lesions of an ill mouse from VV-RG group following VV infection. Lesions can be seen on the tail, legs, and mouth. After imaging the mouse was sacrificed. E: Bioluminescence image of a VV-RG-inoculated mouse. F-H: Fluorescence microscopy of pock-lesions. Typical images observed in mice of both groups having pock-lesions on tail, toes, or mouth. The replication-competent virus VV-RG8 carrying mutation at B8R gene (encoding IFN-gamma receptor homolog) is less pathogenic for mice than the parental vaccine virus VV-RG.