Infection of cattle by bovine herpesvirus 1 (BHV-1) can lead to upper respiratory tract disorders, conjunctivitis, genital disorders, and immune suppression. BHV-1–induced immune suppression initiates bovine respiratory disease complex (BRDC), which costs the US cattle industry more than a billion dollars each year. In addition, BHV-1 is an emerging virus in buffalo. The ability of BHV-1 to inhibit immune responses is crucial for the ability of BHV-1 to induce BRDC. BHV-1 encodes at least 3 proteins that can inhibit specific arms of the immune system: (1) the UL49.5 protein, (2) bICP0, and (3) glycoprotein G. Furthermore, BHV-1 can infect and induce high levels of apoptosis of CD41 T cells, which also inhibit an efficient immune response.

Sources: