



Characterization of Human Rabies Virus-Neutralizing Monoclonal Antibodies

Two novel human recombinant anti-rabies monoclonal antibodies (rhRIGMab) (SO57 and SOJB) in neutralizing Chinese street viruses will be reported at the XVI International Conference of Rabies in Americas on October 16-21, 2005 in Ottawa , Canada by Qian Jia, Jingshuang Wei, Wei Zhao, Ran Tao, Li-jun Chen, Jeffrey A. Mattis*, Koon Y Pak*, and C.E. Rupprecht** North China Pharmaceutical Group Corporation, Shijiazhuang, China *Molecular Targeting Technologies, West Chester, PA, **Centers for Disease Control & Prevention, Atlanta, GA

ABSTRACT

Current post exposure prophylaxis of rabies includes the administration of either human rabies-immunoglobulin (HRIG) or equine rabies immunoglobulin (ERIG) which are associated with various safety concerns or inadequate supply. Administration of crude equine sera has been associated with severe adverse effects such as anaphylactic shock. Although HRIG is considered a safe product from an anaphylactic standpoint, theoretical perceptions still exist because such biologicals are prepared from pooled human sera raising the issue of potential contamination with human pathogens. Two novel human recombinant anti-rabies monoclonal antibodies (rhRIGMab) (SO57 and SOJB) were characterized physiochemically and immunologically including their capacity to neutralize rabies virus in vitro and in vivo. The rhRIGMabs were shown to perform as similar to HRIG in mouse challenge tests using three Chinese street viruses (DR92, SBD, and Jin). Additionally, as expected, rhRIGMabs were shown to interfere with rabies vaccination in a mouse model but to a lesser extent than did HRIG. Continuing studies include the neutralization of a large panel of Chinese street viruses to ensure coverage by these two rhRIGMabs.

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